

BACHARACH, INC.
MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet has been prepared to comply with the EC Directive, Canadian WHMIS and OSHA Hazard Communication Regulations.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

BACHARACH, INC.
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PRODUCT NAME: AMPOULE, HYDROGEN SULFIDE 0.18% IN N2

PRODUCT NUMBER: 51-0034

MSDS NUMBER: 99-0114

REVISION NUMBER: 6

MSDS DATE OF PREPARATION/REVISION: 05-19-00

SECTION 2: COMPOSITION/ INFORMATION INGREDIENTS

Component	CAS#	Percentage	Exposure Limits
Hydrogen Sulfide (H2S)	7783-06-4	0.18	20 ppm PEL-Ceiling 10 ppm TLV-TWA 15 ppm TLV-STEL
Nitrogen (N2)	7727-37-9	Balance	Asphyxiant

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Colorless gas (4.5 cc) in glass ampoules with an offensive rotten egg odor. May cause eye and skin irritation. Inhalation may cause severe lung irritation and death. Glass ampoules will shatter if exposed to high temperatures.

ACUTE HEALTH HAZARDS:

EYE CONTACT: May cause severe irritation with ocular pain, corneal opacity.

SKIN CONTACT: May cause severe irritation, pain, and swelling. May be toxic by absorption.

INHALATION: May cause severe respiratory irritation, headache, nausea, vomiting, and cyanosis. Exposures above 500 ppm may cause respiratory paralysis and death. Only a small amount of gas is present in each ampoule which limits exposure.

INGESTION: Not applicable. This material is a gas.

CHRONIC HEALTH EFFECTS: None known.

CARCINOGEN STATUS: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing respiratory disease may be at increased risk from exposure.

SEE SECTION 11 - TOXICOLOGICAL INFORMATION FOR ADDITIONAL DATA

SECTION 4: FIRST AID

EYE CONTACT: Flush eyes with copious amounts of water, 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Wash well with soap and water. Get medical attention if irritation develops or if systemic effects are noted such as headache, dizziness, or nausea.

INHALATION: Remove victim to fresh air, give artificial respiration if needed. Get immediate medical attention.

INGESTION: None needed.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A (Gas)

TEST METHOD: N/A

AUTOIGNITION TEMPERATURE: Not available

FLAMMABLE LIMITS:

LEL: 4.3% (H2S)

UEL: 45% (H2S)

EXTINGUISHING MEDIA: This gas is not flammable. Cool exposed containers with water.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear NIOSH approved positive pressure self contained breathing apparatus and full protective clothing. Use shielding to protect from glass ampoule explosion.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This mixture is below the LEL of hydrogen sulfide and is non-flammable. It is very toxic. Only a small amount of the gas is present so only a limited health hazard exists from a single ampoule.

HAZARDOUS COMBUSTION PRODUCTS: None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Evacuate area. Ventilate area until concentration is below the PEL. Releases may be reportable under CERCLA and SARA 302 regulations.

SECTION 7: HANDLING AND STORAGE

WORK PRACTICES: Use only with adequate ventilation. Do not breathe gas. Prevent eye and skin contact with gas. Handle with care to prevent unintended breaking of ampoules.

SPECIAL PRECAUTIONS: Keep away from sources of heat as glass ampoules will shatter explosively at high temperatures.

STORAGE: Store ampoules away from heat or open flame and combustible materials. Protect from physical damage. Store in a well ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Adequate ventilation required to assure that the TLV for hydrogen sulfide is not exceeded.

RESPIRATORY PROTECTION: Wear air supplied (with escape bottle if concentration is above immediately dangerous to life or health level - 200 ppm) or self contained breathing apparatus where hydrogen sulfide TLV is exceeded.

GLOVES: Neoprene or butyl rubber gloves for use.

EYE PROTECTION: Chemical safety goggles. Do not wear contact lenses when handling H2S.

OTHER PROTECTIVE EQUIPMENT: None needed.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Colorless gas (4.5 cc) in glass ampoules with an offensive rotten egg odor. 0.03 ppm-deadens sense of smell in a few min; Immed.>200 ppm

pH: N/A

BOILING POINT: -320°F/-196°C (N2)

MELTING POINT: -209.9°C (N2)

SOLUBILITY IN WATER: 1.6% (N2)

COEFFICIENT WATER/OIL: Not available

PERCENT VOLATILE: 100%

VAPOR PRESSURE: N/A (gas)

VAPOR DENSITY: 0.967 (Air = 1)

SPECIFIC GRAVITY: 0.8 g/cc (N2)

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid heat or flames.

INCOMPATIBILITY: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: N/A

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY DATA: Hydrogen Sulfide: LC50 inhalation rat: 444 ppm.

IRRITANCY DATA: This material may cause eye, skin and respiratory irritation.

SENSITIZATION: None of the components have been reported to cause sensitization in animals or humans.

REPRODUCTIVE TOXICITY: None of the components have been reported to cause reproductive toxicity in animals or humans.

TERATOGENICITY: None of the components have been reported to cause teratogenicity in animals or humans.

MUTAGENICITY: None of the components have been found to be mutagenic.

SYNERGISTIC EFFECTS: There are no chemicals known to cause additive adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION

The ecological effects of this product have not been evaluated.

SECTION 13: DISPOSAL

Dispose in accordance with all local, state and federal regulations. Do not incinerate containers.

RCRA HAZARDOUS WASTE CODES: U135

SECTION 14: TRANSPORTATION DATA

US DOT SHIPPING NAME: Not Regulated

DOT LABELS REQUIRED: N/A

EMERGENCY RESPONSE GUIDE NUMBER: N/A

IATA SHIPPING NAME: Not Regulated

IATA LABELS REQUIRED: N/A

SECTION 15: OTHER REGULATORY INFORMATION

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Acute health.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements under SARA Section 313 (40 CFR 372): None

CERCLA SECTION 103 REPORTABLE QUANTITY: Hydrogen Sulfide - 100 lbs.

CALIFORNIA PROPOSITION 65: This product contains the following substances known to the State of California to cause Cancer and/or Reproductive Harm: None

US TOXIC SUBSTANCES CONTROL ACT: All of the components of this product are listed on the EPA TSCA Inventory.

EUROPEAN INVENTORY OF COMMERCIAL CHEMICAL SUBSTANCES: All of the components of this product are listed on the EINECS Inventory.

JAPAN MITI: All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the components of this product are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D-2-B (Toxic Material Causing Other Chronic Effects)
This product has been classified in accordance with the hazard criteria in the CPR and the MSDS contains all the information required by the CPR.

EUROPEAN COMMUNITY LABELING CLASSIFICATION: N/A

EUROPEAN COMMUNITY RISK AND SAFETY PHRASES: None

SECTION 16: OTHER INFORMATION

NFPA HAZARD RATING: **HEALTH:** 3 **FIRE:** 0 **REACTIVITY:** 0

DATE OF LATEST MSDS REVISION: 03-14-97

REVISION SUMMARY: Format Update, Section 9, 15

The preceding information is believed to be correct and current as of the date of preparation of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Bacharach, Inc., it is the users obligation to assure safe use of this product.