

BACHARACH, INC. MSDS

HYDROXYLAMINE SOLUTION

MSDS NO: 4099-1459

ACUTE HEALTH HAZARDS:

EYE CONTACT: May cause severe irritation.

SKIN CONTACT: May cause irritation, sensitization dermatitis.

INHALATION: May cause irritation of the nose, throat and respiratory tract. High concentrations may produce methemoglobinemia with symptoms of headache, dizziness, cyanosis, anoxia, and hypotension.

INGESTION: May cause gastrointestinal irritation. Large doses may result in methemoglobinemia with symptoms described for inhalation.

CHRONIC HEALTH EFFECTS: Prolonged absorption of hydroxylamine hydrochloride may cause nervous system, liver, kidney and bone marrow damage, weight loss and anemia. Prolonged or repeated skin contact may cause sensitization dermatitis.

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

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

SEE SECTION 11 - TOXICOLOGICAL INFORMATION FOR ADDITIONAL DATA
=====

SECTION 4: FIRST AID

EYE CONTACT: Flush thoroughly with copious amounts of running water for 15 minutes, lifting the lids occasionally. Get immediate medical attention.

SKIN CONTACT: Wash thoroughly with soap and water. Remove contaminated clothing and laundry before re-use. Get medical attention if irritation develops.

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

INGESTION: Never give anything by mouth to an unconscious or convulsing person. Immediately give the victim 1-2 glasses of water. Call a poison control center or hospital emergency department immediately and follow their instructions.
=====

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A TEST METHOD: N/A
AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: LEL: N/A UEL: N/A

EXTINGUISHING MEDIA: This material is not combustible. Use any media that is appropriate for the surrounding fire.

N/D=Not Determined

2

N/A=Not Applicable

BACHARACH, INC. MSDS

HYDROXYLAMINE SOLUTION

MSDS NO: 4099-1459

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear NIOSH approved positive pressure self contained breathing apparatus and full protective clothing. Use water to keep exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

HAZARDOUS COMBUSTION PRODUCTS: Hydrogen chloride, oxides of sulfur, nitrogen and carbon.

=====

SECTION 6: ACCIDENTAL RELEASE MEASURES

Wear suitable protective equipment. Dike and contain with inert absorbent. Neutralize with sodium bisulfate and absorb. Place in suitable container. Wash residue with water.

=====

SECTION 7: HANDLING AND STORAGE

WORK PRACTICES: Do not breathe mists. Prevent contact with the eyes, skin & clothing. Wear recommended protective clothing. Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep containers tightly closed when not in use.

SPECIAL PRECAUTIONS: Empty containers retain residues and may be hazardous-follow all precautions when handling.

STORAGE: Store in a cool, well ventilated area, away from oxidizers and other incompatible materials. Keep container tightly closed.

=====

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Use general or local exhaust ventilation as needed to minimize exposures.

RESPIRATORY PROTECTION: If use conditions create a mist use an approved dust/mist respirator. For higher concentrations an approved supplied air or self-contained respirator may be required.

GLOVES: Impervious such as rubber or neoprene.

EYE PROTECTION: Chemical safety goggles recommended. Do not wear contact lenses.

OTHER PROTECTIVE EQUIPMENT: Protective apron or lab coat. Safety shower and eye wash in the work area.

BACHARACH, INC. MSDS

HYDROXYLAMINE SOLUTION

MSDS NO: 4099-1459

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Colorless liquid, odorless. N/A

pH: Unknown SPECIFIC GRAVITY: Approx. 1.0
BOILING POINT: Not available VAPOR PRESSURE: 14 mmHG @ 20C(water)
MELTING POINT: Not available VAPOR DENSITY: 0.7 (water)
SOLUBILITY IN WATER: Complete PERCENT VOLATILE: 97%
COEFFICIENT WATER/OIL: Nor available

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid heating material to boiling.

INCOMPATIBILITY: Pyridine, oxidizers, strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, oxides of sulfur and nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: N/A

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY DATA: LD50 hydroxylamine hydrochloride: 408 mg/kg oral mouse. LD50 sodium sulfate: 5989 mg/kg oral mouse.

IRRITANCY DATA: This material may be an irritant.

SENSITIZATION: Hydroxylamine hydrochloride has been reported to cause sensitization dermatitis in humans.

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

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

MUTAGENICITY: Sodium sulfate and hydroxylamine hydrochloride have been found to be mutagenic in some test systems.

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

BACHARACH, INC. MSDS

HYDROXYLAMINE SOLUTION

MSDS NO: 4099-1459

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.

RCRA HAZARDOUS WASTE CODES: None

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, chronic 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: None

CALIFORNIA PROPOSITION 65: This product contains the following substances known to
the State of California to cause Cancer and/or Reproductive Harm: Not regulated.

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 - Division 2B (Toxic Material Causing Other
Chronic Effects)

N/D=Not Determined

5

N/A=Not Applicable

BACHARACH, INC. MSDS

HYDROXYLAMINE SOLUTION

MSDS NO: 4099-1459

EUROPEAN COMMUNITY LABELING CLASSIFICATION: Harmful (Xn)

EUROPEAN COMMUNITY RISK AND SAFETY PHRASES: R22, S24/25
=====

SECTION 16: OTHER INFORMATION

NFPA HAZARD RATING: HEALTH: 2 FIRE: 0 REACTIVITY: 0

DATE OF LATEST MSDS REVISION: 03-12-97

REVISION SUMMARY: Revised First Aid, Section 4.
=====

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.