

SE-9461

MATERIAL SAFETY DATA SHEET

IDENTITY: Spectrum Tube, Hydrogen (ETP Product No. 20502)

SECTION I

| | |
|---|--|
| MANUFACTURER: Electro-Technic Products, Inc. | EMERGENCY TELEPHONE NUMBER 312-561-2349 |
| ADDRESS 4642 N. Ravenswood Ave. Chicago, IL 60640-4592 | TELEPHONE FOR INFORMATION 312-561-2349 |
| | FAX NUMBER FOR INFORMATION 312-561-3130 |

DATE PREPARED August 7, 1989

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

| HAZARDOUS COMPONENT | OSHA TWA | ACGIH TWA | OTHER LIMITS | % (OPT) |
|---------------------------|------------------|-----------|--------------|---------|
| Hydrogen(H ₂) | None established | | | |

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

| | |
|--|---|
| BOILING POINT (deg C) - 252.8 °C | SPECIFIC VOLUME (@ 1 ATM, 21.1 °C) 11.967 m ³ /kg |
| VAPOR PRESSURE (Torr) Not applicable | MELTING POINT (deg C) Not applicable |
| VAPOR DENSITY (AIR=1) 0.0695 @ 1 ATM, 25 °C | EVAPORATION RATE (BUTYL ACETATE=1) Not applicable |
| SOLUBILITY IN WATER 18.02 cm ³ /kg water, 1 ATM, 20 °C | APPEARANCE AND ODOR Colorless, odorless gas |

SECTION IV - FIRE AND EXPLOSION DATA

| | | | |
|---|---------------------------------------|-----|-----|
| FLASH POINT (METHOD USED) Auto Ignition 571.2 °C | FLAMMABLE LIMITS 4 - 75% by volume | LEL | UEL |
| EXTINGUISHING MEDIA | Stop flow of gas | | |
| SPECIAL FIRE FIGHTING PROCEDURES | None | | |

UNUSUAL FIRE AND EXPLOSION HAZARDS None, at small concentrations of hydrogen gas inside of tube

MSDS Part Number 085-0115-2

SECTION V - REACTIVITY DATA **Spectrum Tube, Hydrogen**

STABLE (Y/N) **Y** CONDITIONS TO AVOID **Oxidizing agents**

INCOMPATIBILITY (MATERIALS TO AVOID) **Avoid oxidizing agents**

HAZARDOUS DECOMPOSITION PRODUCTS **None**

HAZARDOUS POLYMERIZATION (Y/N) **N** CONDITIONS TO AVOID **None**

SECTION VI - HEALTH HAZARD DATA

ROUTES OF ENTRY INHALATION? SKIN? INGESTION?
 Yes **No** **No**

HEALTH HAZARDS (ACUTE AND CHRONIC) **None**

CARCINOGENICITY NTP IARC MONOGRAPHS OSHA REGULATED
 No **No** **No**

SIGNS AND SYMPTOMS OF EXPOSURE **None**

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE **None**

EMERGENCY AND FIRST AID PROCEDURES **None**

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Clean up broken glass

WASTE DISPOSAL METHOD **Standard**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Sharp glass fragments

OTHER PRECAUTIONS **None**

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (TYPE) **None**

VENTILATION: LOCAL EXHAUST SPECIAL
 MECHANICAL **None** OTHER **None**

PROTECTIVE GLOVES **No** EYE PROTECTION **Safety goggles**

OTHER PROTECTIVE EQUIPMENT **None**

WORK/HYGIENIC PRACTICES **Normal laboratory procedures**