

# MATERIAL SAFETY DATA SHEET

For R&D use only. Not for drug, household or other uses.

Click <http://www.lookchem.com/cas-240/24028-46-4.html> for suppliers of this product.

## Composition/Information on Ingredient

**Cas:**  
24028-46-4

**Code:**  
M

**RTECS:**

**Code:**  
X

**Name:**  
PIPERARZINYL-ETHYLENEDIAMINE

**Other REC Limits:**  
NONE RECOMMENDED

**OSHA PEL:**  
NOT ESTABLISHED

**Code:**  
M

**OSHA STEL:**

**Code:**

**ACGIH TLV:**  
NOT ESTABLISHED

**Code:**  
M

**ACGIHSTEL:**  
N/P

**Code:**

## Control Measures

**Respiratory Protection:**  
IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONCENTRATIONS BELOW TLV, USE NIOSH-APPROVED RESPIRATOR EQUIPPED WITH ORGANIC VAPOR CARTRIDGES MAY BE APPROPRIATE. FOR FIRE/EMERGENCY, USE SELF-CONTAINED BREATHING APPARATUS.

**Ventilation:**  
LOCAL EXHAUST VENTILATION AT THE POINT OF USE.

**Protective Gloves:**  
BUTYL RUBBER, PVC OR NITRILE

**Eye Protection:**  
5 SAFETY GLASSES+SIDE SHIELD/CHEM GOGGLES

**Other Protective Equipment:**  
Equipment USE RUBBER SPLASH APRON AND RUBBER BOOTS. EYEWASH AND SAFETY SHOWER SHOULD BE LOCATED NEARBY.

**Work Hygienic Practices:**  
OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

**Supplemental Safety and Health:**  
NOTE TO PHYSICIAN: MAY CAUSE TISSUE DESTRUCTION LEADING TO STRICTURE. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGOSCOPIC CONTROL. TREAT BURNS AS THERMAL BURNS, AFTER DECONTAMINATION. NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. EXCESSIVE EXPOSURE MAY AGGRAVATE PREEXISTING ASTHMA.

## Health Hazards Data

**LD50LC50Mixture:**  
LD50 (ORAL, RAT) IS 4340 MG/KG.

**Route Of Entry Inds - Inhalation:**  
NO

**Skin:**  
YES

**Ingestion:**  
YES 3

**Carcinogenicity Inds - NTP:**  
NO

**IARC:**  
NO

**OSHA:**  
NO

**Health Hazards Acute And Chronic:**  
TARGET ORGANS:EYES, SKIN, RESPIRATORY & GI TRACTS. ACUTE- CORROSIVE. ORAL:MAY CAUSE MOUTH & THROAT BURNS & ULCERATION. EYE:MAY CAUSE SEVERE IRRITATION, EVEN BLINDNESS. SKIN:MAY CAUSE SEVERE BURNS. MAY BE ABSORBED THROUGH SKIN. INHALE:MAY CAUSE RESPIRATORY SENSITIZATION IN SUSCEPTIBLE PERSONS. CHRONIC- UNKNOWN.

**Explanation Of Carcinogenicity:**  
NONE

**Signs And Symptions Of Overexposure:**  
SEVERE EYE IRRITATION, PAIN, CORNEAL INJURY, EVEN BLINDNESS; SEVERE SKIN BURNS, ALLERGIC SKIN REACTION; GASTROINTESTINAL IRRITATION OR ULCERATION; THROAT AND MOUTH BURNS, RESPIRATORY IRRITATION OR SENSITIZATION

**Medical Cond Aggravated By Exposure:**  
INDIVIDUALS WITH PRE-EXISTING DISEASES OF THE EYE, SKIN, RESPIRATORY TRACT MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.

**First Aid:**  
GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES:FLUSH WITH WATER FOR 30 MINUTES, HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. SKIN:FLUSH WITH PLENTY OF WATER FOR 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING. ORAL:DO NOT INDUCE VOMITING. IF CONSCIOUS, DRINK PLENTY OF WATER OR MILK. GET MEDICAL ATTENTION IMMEDIATELY.

**Spill Release Procedures:**  
WEAR PROPER PROTECTIVE EQUIPMENT. VENTILATE AREA. DO NOT RELEASE INTO SOIL, SEWER, STREAM. S LEAK IF POSSIBLE. ABSORB SPILL WITH VERMICULITE OR SAND. SCRAPE UP OR SHOVEL INTO PROPER CONTAINER FOR LATER DISPOSAL.

**Neutralizing Agent:**  
NOT RELEVANT

**Waste Disposal Methods:**  
CONTACT FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATORS FOR GUIDANCE REGARDING PROPER DISPOSAL. INCINERATION IN AN EPA-APPROVED INCINERATOR IS A PREFERRED DISPOSAL PRACTICE. THIS MATERIAL, AS A WASTE, IS NOT CONSIDERED A RCRA HAZARDOUS WASTE.

**Handling And Storage Precautions:**  
KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. GROUND ALL TRANSFER EQUIPMENT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. AVOID CONTACT WITH COPPER. 4

**Other Precautions:**  
CORROSIVE. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID BREATHING VAPORS/MIST. USE WITH ADEQUATE VENTILATION. EMPTY CONTAINERS RETAIN RESIDUE. DO NOT CUT, GRIND, WELD OR DRILL ON OR NEAR THIS CONTAINER. KEEP OUT OF REACH OF CHILDREN.

## Fire and Explosion Hazard Information

**Flash Point Method:**  
PMCC

**Flash Point:**

**Flash Point Text:**  
245F,118C

**Autoignition Temp:**

**Autoignition Temp Text:**  
561F

**Lower Limits:**  
1.1% @ 365F

**Upper Limits:**  
>6.4% @ 365F

**Extinguishing Media:**  
WATER FOG, CARBON DIOXIDE, ALCOHOL FOAM/DRY CHEMICAL. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL.

**Fire Fighting Procedures:**  
WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE MODE.

**Unusual Fire/Explosion Hazard:**  
NONE

## Physical/Chemical Properties

**HCC:**  
B2

**NRC/State LIC No:**  
NOT RELEVANT

**Net Prop WT For Ammo:**

**Boiling Point:**

**B.P. Text:**  
482F,250C

**Melt/Freeze Pt:**

**M.P/F.P Text:**  
UNKNOWN

**Decomp Temp:**

**Decomp Text:**  
UNKNOWN

**Vapor Pres:**  
<1 @ 68F

**Vapor Density:**  
5.04

**Volatile Org Content %:**

**Spec Gravity:**  
0.973 - 0.981

**VOC Pounds/Gallon:**

**PH:** N/K

**VOC Grams/Liter:**

**Viscosity:**  
UNKNOWN

**Evaporation Rate & Reference:**  
UNKNOWN

**Solubility in Water:**  
MIXES COMPLETELY

**Appearance and Odor:**  
LIGHT, STRAW-COLORED LIQUID WITH AMINE ODOR 6

**Percent Volatiles by Volume:**  
N/K

**Corrosion Rate:**  
UNKNOWN

## Reactivity Data

**Stability Indicator:**  
YES

**Stability Condition To Avoid:**  
CAN AUTOIGNITE IN AIR AT APPROXIMATELY 561F (294C).

**Materials To Avoid:**  
OXIDIZING AGENTS, ACIDS, HALOGENATED ORGANIC COMPOUNDS

**Hazardous Decomposition Products:**  
OXIDES OF NITROGEN, CARBON MONOXIDE, CARBON DIOXIDE MAY BE FORMED.

**Hazardous Polymerization Indicator:**  
NO

**Conditions To Avoid Polymerization:**  
NONE

## Toxicological Information

**Information:**N/P

## MSDS Transport Information

**Information:**N/P

## Regulatory Information

**Sara Title III Information:** N/P

**Federal Regulatory Information:** N/P

**State Regulatory Information:** N/P

## Other Information

**Other Information:**N/P