

Chemical Safety Practices Recommendations

Phenylhydrazine HCl (Hydrazinobenzene, PhNHNH₂)

Exposure Hazards (1, 2)			
<p>Category 1 Danger Toxic</p>  <p>Repeated exposure affects blood, respiratory system, liver, kidneys, and skin.</p>	<p>Category 1B Danger</p>  <p>Carcinogenicity Causes cancer of the lungs, liver, blood vessels & intestine in animals.</p>	<p>Category 1 Warning</p>  <p>Skin Sensitization Causes Allergies</p>	
<p>Category 2 Warning</p>  <p>Germ Cell Mutagenicity Causes mutations</p>	<p>Category 2 Warning Irritant</p>  <p>Causes skin, eye, and respiratory irritation.</p>	<p>Category 3 Danger Toxic</p>  <p>Exposure affects blood, respiratory system, liver, kidneys, and skin.</p>	
Response to Exposure			
Oral	Dermal	Inhalation	Injection
Rinse mouth; do not induce vomiting. Report to OHS.	Wash skin with soap and water for 15 minutes. Rinse eyes for 15 minutes. Report to OHS.	Leave area; go to clean air. Report to OHS.	Report to OHS.
Special Precautions	PhNHNH ₂ in DMSO will <u>rapidly</u> penetrate nitrile gloves and skin. Discard garments as hazardous if contaminated with PhNHNH ₂ .		
Personal Protective Equipment	Gloves (Double glove) (Latex or Nitrile) Skin Protection (Suit or Scrubs or Lab Coat) Eye Protection (Safety-glasses or Goggles) Closed-toe shoes Use N100 respirator if engineering controls are not available.		
Engineering Controls	PhNHNH ₂ powder- Chemical Fume Hood (CFH) PhNHNH ₂ solution- CFH or Biosafety Cabinet (Class II, B2 BSC if aerosolized) Animal waste and bedding until 10 days after last treatment- CFH or Class II, B2 BSC		
	 Micro-isolator Caging		
Animal Handling	Avoid exposure to animal waste/tissue until 10 days after last treatment. (3)		
Bedding Disposal	Dispose of bedding as hazardous material until 10 days after last treatment.		
Work Practices	Empty PhNHNH ₂ containers and unused PhNHNH ₂ must be disposed of as hazardous. Follow LASP SOPs for preparation, handling, dosing, and disposal of PhNHNH ₂ .		

Questions or concerns: Please contact EHS, Ted Witte, theodore.witte@nih.gov or 301-846-5860
 Reviewed 11/7/2014 *These recommendations are not final and may be updated.*

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References:

1. PhenylHydrazine MSDS [Internet]. Sigma-Aldrich. 2014 [cited 10/29/2014]. Available from: <http://www.sigmaaldrich.com/united-states.html>.
2. NIOSH Pocket Guide to Chemical Hazards - Phenylhydrazine [Internet]. [cited 10/30/2014]. Available from: <http://www.cdc.gov/niosh/npg/npgd0499.html>.
3. Mc IW, Parke DV, Williams RT. Studies in detoxication. 77. The metabolism of phenylhydrazine and some phenyl-hydrazones. The Biochemical journal. 1958;70(4):688-97.