

This product contains ammonia and nitrogen, substances subject to the Pennsylvania Worker and Community Right-To-Know Act.

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 10044014 calibration check gas, 300 ppm Ammonia in Nitrogen
CHEMICAL NAME - Ammonia, Nitrogen Mixture
ADDITIONAL IDENTITIES - MSA P/N 10044014 Calibration Gas
FORMULA - NH₃ in N₂

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>	<u>STEL</u>
Ammonia (CAS 7664-41-7) (ACGIH 2009)	0.030	25 ppm	35 ppm
Nitrogen (CAS 7727-37-9)	Balance	None	

NOTE: Gas Under Pressure, 500 PSIG at 70°F, and approx. 58 Liters Gas at Atmospheric Pressure

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless gas with a mild, ammonia odor.

Following information is for Nitrogen the main component of this gas mixture

BOILING POINT - -320.4°F (-195.8 ° C) SPECIFIC GRAVITY (air = 1) @70°F (21.1 °C): 0.906

VAPOR PRESSURE @70°F (21.1 °C): N/A* PERCENT VOLATILE BY VOLUME - N/A*

GAS DENSITY @32°F (0 °C) and 1 atm: 0.072 lbs/ft³ (1.153 kg/ m³)

SOLUBILITY IN WATER - NH₃ - Soluble
Nitrogen - 2.3 cm³/100 ml (0°C)

*N/A - Not Applicable

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed gas, 500 PSIG at 70°F

CONDITIONS OR MATERIALS TO AVOID - Contact with elemental calcium, mercury, and silver or with hypochlorite bleaches may form highly explosive products. Avoid contact with halogens, acids, copper, and zinc.

FLASH POINT - N/A LEL - N/A UEL - N/A

EXTINGUISHING MEDIA: Non-flammable gas mixture. Use Extinguishing media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES – Cylinders exposed to high temperatures or direct flame can rupture or burst.

UNUSUAL FIRE AND EXPLOSION HAZARDS - Gas under pressure, 500 PSIG at 70°F. Do not exceed 120°F.

HEALTH HAZARDS

HEALTH HAZARDS – LC₁₀ of Ammonia for human inhalation is 30,000ppm/5 minutes. Exposure to atmospheres contaminated with ammonia is extremely irritating. Its odor and prompt irritant action provide a warning of exposure to hazardous condition. While ammonia is a highly toxic gas, the small quantity of ammonia available from this calibration cylinder (58 liters of 300 ppm ammonia in nitrogen or approx. 12 milligrams of ammonia) is insufficient to sustain a material volume above the TWA of 25 ppm if accidentally released to ambient air. The contents of one cylinder diluted to 1 cubic meter of ambient air would yield 17.4 ppm ammonia.

SIGNS AND SYMPTOMS OF EXPOSURE - Ammonia is extremely irritating to the airway, eyes and skin. Depending on the intensity and duration of the exposure, effects may vary from mild irritation to severe destruction of tissues. Symptoms of exposure may include burning sensations, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Penetration of ammonia into the lower airway may produce bronchitis, chemical pneumonitis and pulmonary edema. Contact of ammonia with eyes will cause pain, tearing, and inflammation, swelling of tissue and possible destruction of the eye. Contact of ammonia with skin will cause severe burns.

PRIMARY ROUTES OF ENTRY - Inhalation, eyes, and skin.

TARGET ORGANS - Ammonia is an irritant to the eyes, skin and respiratory tract.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE – Acute or chronic respiratory conditions may be aggravated by over-exposure to the components of this product.

EXPOSURE LIMITS - ACGIH 2009: Ammonia TWA 25 ppm, STEL 35 ppm; OSHA PEL 50 ppm.

CARCINOGENICITY DATA - NIOSH RTECS, OSHA, NTP or IARC does not list component gas.

EMERGENCY AND FIRST AID PROCEDURES - Overexposure to ammonia is not indicated due to the limited quantity of ammonia contained in an individual cylinder of P/N 10044014 (12 milligrams ammonia). Nevertheless, a first aid procedure for overexposure to ammonia vapors is presented should overexposure somehow occur.

Inhalation: Remove the victim to fresh air. If breathing has stopped or is impaired, give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen should be administered. Keep the victim warm and quiet. Assure that the victim does not aspirate vomited material by use of positional drainage. Assure that mucus does not obstruct the airway. Seek medical attention at once.

Eye Contact: Persons potentially exposed to ammonia should not use contact lenses. Ammonia contamination of the eyes should be treated by immediate and prolonged gentle irrigation for 15 minutes with large quantities of water. The eyes should be held open during the irrigation. Obtain medical assistance at once.

Skin Contact: Flush the affected area promptly with large quantities of water for 15 minutes. Remove contaminated clothing as quickly as possible. Except in the most minor, superficial and localized burns, cover the affected area with a sterile dressing or clean sheeting and transport for medical care. Do not apply greases or ointments. Control shock if present. Launder contaminated clothing before reuse. Contaminated footwear must generally be discarded.

SAFE HANDLING AND USE

HYGIENIC PRACTICES - Avoid breathing gas.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT - N/A

PROCEDURES FOR SPILL OR LEAK CLEANUP - Ventilate area.

WASTE DISPOSAL - Do not puncture or incinerate cylinder. Before discarding cylinder, slowly release contents to a safe exhaust. Dispose of in accordance with appropriate Federal, State and local regulations.

STORAGE - Store in a cool, dry, well-ventilated area. Do not exceed 120°F.

CONTROL MEASURES

PERSONAL PROTECTIVE EQUIPMENT - Due to the limited amount of gas in the cylinder, and the low release rate employed in instrument calibration, respiratory protection is not indicated under conditions of intended use.

ENGINEERING CONTROLS - Mechanical ventilation is suitable.

WORK PRACTICES - Avoid breathing gas. Use in well-ventilated areas. Follow the calibration procedure detailed in the MSA instruction manual provided with the instrument under calibration.

DATE OF PREPARATION – Rev. 1 July 2009

WARNING: This is a hazardous chemical product. By following the directions and warnings provided with this product, the hazards associated with the use of this product can be greatly reduced but never entirely eliminated. Mine Safety Appliances Company makes no warranties, expressed or implied, with respect to this product and EXPRESSLY DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Users assume all risks in handling, using or storing this product.