

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

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**PRODUCT IDENTITY**

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LABEL IDENTITY - MSA P/N 711082 Calibration Check Gas, 2 ppm Chlorine in Nitrogen  
CHEMICAL NAME - Chlorine, Nitrogen Mixture  
ADDITIONAL IDENTITIES - MSA P/N 711082 Calibration Gas  
FORMULA - Cl<sub>2</sub> in N<sub>2</sub>

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**APPLICABLE CHEMICAL CONTENTS**

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	<u>%</u>	<u>TWA</u>	<u>STEL</u>
Chlorine (CAS 7782-50-5)(ACGIH 2005)	0.0002	0.5 ppm	1.0 ppm
Nitrogen (CAS 7727-37-9)	Balance	None	

NOTE: Gas under pressure, 500 PSIG at 70°F, Approx. 34 Liters gas at atmospheric pressure

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**PHYSICAL AND CHEMICAL PROPERTIES**

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APPEARANCE AND ODOR - Colorless (2 ppm); Characteristic Disagreeable Odor  
BOILING POINT - N/A  
VAPOR PRESSURE - N/A  
VAPOR DENSITY (AIR = 1) - 1  
SOLUBILITY IN WATER - Cl<sub>2</sub> - 461 cm<sup>3</sup>/100 ml (0°C)  
Nitrogen - 2.3 cm<sup>3</sup>/100 ml (0°C)

SPECIFIC GRAVITY (H<sub>2</sub>O = 1) - N/A  
PERCENT VOLATILE BY VOLUME - N/A

N/A - Not Applicable

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**PHYSICAL HAZARD INFORMATION**

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PHYSICAL HAZARD - Compressed gas, 500 PSIG at 70°F  
CONDITIONS OR MATERIALS TO AVOID - None  
FLASH POINT - N/A  
LEL - N/A  
UEL - N/A  
EXTINGUISHING MEDIA - This calibration gas is not flammable.  
SPECIAL FIRE FIGHTING PROCEDURES - See next item.  
UNUSUAL FIRE AND EXPLOSION HAZARDS - Gas under pressure, 500 PSIG at 70°F. Do not exceed 120°F.

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**HEALTH HAZARDS**


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HEALTH HAZARDS - Chlorine is an irritant to mucous membranes, eyes, and skin. It is toxic and corrosive. LC<sub>LO</sub> Human 500 ppm/5 min. LC<sub>50</sub> Rat 293 ppm/one hour. LC<sub>50</sub> Mouse 137 ppm/one hour. LC<sub>LO</sub> Dog 800 ppm/30 min..

SIGNS AND SYMPTOMS OF EXPOSURE - Reported responses:

0.02 - 0.2 ppm - reported odor threshold	15 ppm - throat irritation
0.2-16 ppm - mild mucous membrane irritation	30 ppm - cough
7-8 ppm - eye irritation	1000 ppm - fatal after a few deep breaths

PRIMARY ROUTES OF ENTRY - Inhalation, Eyes

TARGET ORGANS - Respiratory tract, eyes

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE - No Information

EXPOSURE LIMITS – (ACGIH 2005): Chlorine 0.5 ppm, OSHA STEL 1.0 ppm

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

EMERGENCY AND FIRST AID PROCEDURES - Remove from exposure. If breathing has stopped, give artificial respiration. Administer oxygen. CONSULT A PHYSICIAN IMMEDIATELY.

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**SAFE HANDLING AND USE**


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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 cylinder in accordance with local, state and federal regulations.

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

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**CONTROL MEASURES**


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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. 6, March 2007

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.