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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 550 ppm/5M. LC<sub>50</sub> Rat 293 ppm/ 1 hour. LC<sub>50</sub> Mouse 137 ppm / 1 hour. LC<sub>LO</sub> Dog 800 ppm/ 30 minutes.

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	40-60 ppm – serious damage

PRIMARY ROUTES OF ENTRY - Inhalation, skin and or eye contact.

TARGET ORGANS - Respiratory tract, eyes, skin.

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

EXPOSURE LIMITS - ACGIH 2011: Cl<sub>2</sub> 0.5 ppm, STEL 1.0 ppm; OSHA : PEL 1 ppm ceiling

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. 3, Sept 2011

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.