

REC'D MAR 23 2000

6140  
TOL00196

**MATERIAL SAFETY DATA SHEET**  
29 CFR 1910.1200 OSHA Hazard  
Communication Rule Format  
Chem-Tel 24 Hour Emergency # 1-800-255-3924

**MINE SAFETY APPLIANCES COMPANY**  
P.O. Box 426  
Pittsburgh, PA 15230  
PHONE (412) 967-3000

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. Section 313 chemicals are identified below under **APPLICABLE CHEMICAL CONTENTS**.

This product contains 1,1,2-Trichloro-1,2,2-Trifluoroethane 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 813368 Calibration Check Gas, 30 ppm R-113 in Nitrogen

CHEMICAL NAME - in Nitrogen

ADDITIONAL IDENTITIES - MSA P/N 813368 Calibration Gas 30 ppm R-113 in Nitrogen

FORMULA -  $CCl_2FCClF_2$  in  $N_2$

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**APPLICABLE CHEMICAL CONTENTS**

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	%	TWA (ACGIH 1999)	STEL (ACGIH 1999)
$CCl_2FCClF_2$ (CAS 76-13-1)	0.003	1000 ppm	1250ppm
Nitrogen (CAS 7727-37-9)	Balance	None	None

NOTE: Gas Under Pressure, 1000 PSIG at 70°F, Approx. 100 Liters Gas at Atmospheric Pressure

Title III Section 313 Chemical: 1,1,2-Trichloro-1,2,2-Trifluoroethane (CAS No. 76-13-1)

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**PHYSICAL AND CHEMICAL PROPERTIES**

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APPEARANCE AND ODOR - Colorless, Odorless Gas Mixture

BOILING POINT - N/A

SPECIFIC GRAVITY ( $H_2O = 1$ ) - N/A

VAPOR PRESSURE - N/A

PERCENT VOLATILE BY VOLUME - N/A

VAPOR DENSITY (AIR = 1) - > 1

SOLUBILITY IN WATER -  $CCl_2FCClF_2$  - approx.  $2.5 \text{ cm}^3/100 \text{ ml}$  (25°C)  
Nitrogen -  $2.3 \text{ cm}^3/100 \text{ ml}$  (0°C)

N/A - Not Applicable

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**PHYSICAL HAZARD INFORMATION**

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PHYSICAL HAZARD - Compressed Gas, 1000 PSIG at 70°F

CONDITIONS OR MATERIALS TO AVOID - Avoid bases. Avoid powdered active metals such as aluminum, alkali metals or alkaline earth metals.

FLASH POINT - N/A

LEL - N/A

UEL - N/A

EXTINGUISHING MEDIA - This Calibration Gas Mixture Is Not Flammable

SPECIAL FIRE FIGHTING PROCEDURES -  $CCl_2FCClF_2$  decomposes at high temperatures yielding toxic halogen compounds. Use self-contained pressure demand type breathing apparatus with full facepiece.

UNUSUAL FIRE AND EXPLOSION HAZARDS - Gas Under Pressure, 1000 PSIG at 70°F. Do Not Exceed 120°F.

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MSA P/N 813368

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### HEALTH HAZARDS

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HEALTH HAZARDS - The 1999 ACGIH TWA for R-113 is 1000 ppm. R-113 inhalation 4-hour LC50 (RAT) is 52,500 ppm. Nitrogen is an asphyxiant.

SIGNS AND SYMPTOMS OF EXPOSURE: None known for 100 ppm R-113. Nitrogen is an asphyxiant. Significant dilution of ambient air by asphyxiants causes air hunger, increased breathing frequency, drowsiness, weakness, and ringing in ears.

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS - Lungs

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

EXPOSURE LIMITS - 1999 ACGIH TWA for R-113 is 1000 ppm.

CARCINOGENICITY DATA - Neither Nitrogen nor R-113 is listed by NIOSH RTECS, IARC, NTP or OSHA.

EMERGENCY AND FIRST AID PROCEDURES - Remove victim from exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention 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.

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. 1, February 15, 2000

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.