Material Safety Data Sheet
Xenon

Xe

1. Chemical Product and Company Identification:

Company: Concorde Specialty Gases Inc.
36 Eaton Rd.
Eatontown, N.J. 07724 USA

Product Name: Xenon
Product Use: For general analytical/synthetical chemical uses.

2. Composition/ Information on Ingredients:

Ingredient Name: Xenon
Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-to-Know" compliance and for other reasons.

3. Hazards Identification:

Emergency Overview: Xenon is an odorless, colorless, nonflammable, liquefied gas. Xenon can cause central nervous system depression after exposure by inhalation. Symptoms of such overexposure can include drowsiness, fatigue and weakness. Inhalation at high concentrations may cause asphyxiation by displacement of oxygen, light headedness, shortness of breath and dizziness in extreme cases, irregular heartbeats, cardiac arrest and death. Contact with this gas may cause frostbite. Symptoms of frostbite include change in skin color to white or grayish-yellow and may even have a blue color. The pain after such contact with liquid can quickly subside. This gas is not flammable or reactive in normal response situations.

The effects associated with different levels of oxygen are as follows:

Concentration of Oxygen	Symptoms of Exposure
12-16%	Breathing and pulse rate increased, muscular coordination slightly disturbed.
10-14%	Emotional upset, abnormal fatigue, disturbed respiration.
6-10%	Nausea and vomiting, collapse or loss of consciousness.
Below 6%	Convulsive movements, possible respiratory collapse and death.

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4. First aid measures

Rescuers should not attempt to retrieve victims of exposure to Xenon without adequate personal protective equipment. Self contained breathing and personal protective equipment should be used. Remove victim(s) to fresh air as quickly as possible. Trained personnel should administer supplemental oxygen and cardiopulmonary resuscitation, if necessary. In cases of frostbite-like injury, wash with soap and warm water. Contact a physician if irritation or pain persists. Seek immediate medical help.

5. Fire fighting measures

Flammable Properties: Flash Point: N/A Flash Point Method: N/A
Autoignition Temp: N/A Upper Flame Limit (volume % in air): N/A
Lower Flame Limit (volume % in air): N/A Flame Propagation Rate (Solids): N/A OSHA Flammability Class: Non-combustible gas Extinguishing Media: If involved in a fire, use dry chemical or carbon dioxide for small fires or water spray, fog or regular foam for large fires.
Unusual Fire and Explosion Hazards: Cylinders may explode in heat of fire. Fire may produce irritating or poisonous gases.
Special Fire Fighting Precautions/Instructions: Wear self-contained breathing apparatus. Cool cylinders, exposed to heat of fire, by flooding with water. Apply water from as far a distance as possible.

6. Accidental release measures

IN CASE OF SPILL OR OTHER RELEASE
Always wear recommended personal protective equipment. Evacuate unprotected personnel. Stay upwind. Protected personnel (see section 8) may shut off lead if without risk. Product will destroy itself. Spills and releases may have to be reported to Federal and/or local authorities. See section 15 regarding reporting requirements.

7. Handling and Storage

Normal Handling: Always wear recommended personal protective equipment. Observe precautions on cylinder label. Protect cylinders from physical damage.
Storage Recommendations: Protect cylinders from physical damage, heat and sunlight.
Store in an area of low fire risk. For additional information, see Compressed Gas Association Pamphlet, “Safe Handling of Compressed Gases in Containers”, 7th Edition, 1984.

8. Exposure controls and personal protection

Engineering Controls: General mechanical ventilation
Personal Protective Equipment Skin Protection: Rubber gloves and coveralls.
Eye Protection: Safety glasses.
Respiratory Protection: Self-contained breathing apparatus or air supplied respirator if needed.
Note that an accidental release of Xenon may reduce the oxygen content of the local atmosphere below 16% (see section 3). Additional Recommendations: None.

Exposure Guidelines

No OSHA PEL or ACGIH TLV has been established for this substance.
Limit established by Workplace Environmental Exposures Level (AIHA)
Biological Exposure Index (ACGIH)
Other Exposure Limits for Potential Decomposition Products: None

9. Physical and chemical properties:

Appearance: Colorless gas
Physical State: Gas
Molecular Weight: 131.29 g/mole
Chemical Formula: Xe
Odor: Odorless
Specific Gravity (Air =1): 4.56

10. Stability and reactivity

Normal Stable (Conditions to Avoid): Stable under normal conditions.
Incompatibilities: None.
HAZARDOUS DECOMPOSITION PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous Polymerization: Will not occur.
Solubility in Water (weight %): Negligible.
PH: Not applicable
Boiling Point: -108.1°C (-162.6°F)
Freezing Point: -111°C (-167.8°F)
Vapor Pressure: Not applicable (gas)
Vapor Density: 4.56 (Air = 1)
Evaporation Rate: Not applicable
% Volatile: 100% (v/v).
Flashpoints: Not applicable

11. Toxicological Information

INHALATION: Xenon is high-pressure gas that can cause rapid suffocation. Moderate concentrations may cause headaches, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.
SKIN AND EYE: May cause minor irritation.
OTHER: No OSHA PEL or ACGIH TLV has been established for this substance.

12. Ecological Information

Not Applicable. Xenon does not contain any Class I or Class II ozone depleting chemicals.

13. Disposable Considerations

Do not attempt to dispose of residual waste or unused quantities. Return the shipping container properly labeled with any valve outlet plugs or caps secured and valve protection cap in place to the authorized distributor for proper disposal. For Hazardous Materials Emergency (Spill, Leak,

Fire, Exposure or accident). Call Chemtrec at (800) 424-9300. Outside the U.S. call (703) 527-3887

14. Transportation Information

DOT/IMO SHIPPING NAME: Xenon, Compressed
US DOT Hazard Class: Class 2.2
US DOT ID Number: UN2036
SHIPPING LABEL(s): NONFLAMMABLE GAS
C.A.S Registry No.: 7440-63-3
For additional information on shipping regulations regarding this material, contact Concorde Specialty Gases, Inc.

15. Regulations

United States inventory (TSCA 8b): This material is listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: xenon
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Xenon: Sudden release of pressure
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

16 Other information:

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This information was last updated on May 2011.