

Intermountain Specialty Gases

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MATERIAL SAFETY DATA SHEET

Issue Date: Jan. 2006
Reviewed: February 2012

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1. CHEMICAL PRODUCT

PRODUCT NAME: Benzene/Air SYNONYMS: Benzene/Oxygen/Nitrogen

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	TLV
Benzene	C ₆ H ₆	71-43-2	1-500 PPM	0.5 PPM TWA STEL 2.5 PPM
Air	N/Ap	N/Ap	Balance	N/Ap

IDLH: 500 PPM Benzene

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS: Colorless, odorless non-flammable gas mixture. Benzene is a known human carcinogen and a possible human mutagen. Inhalation of benzene can cause central nervous system effects and serious, permanent damage to blood system.

ROUTES OF ENTRY: Inhalation, Skin, Eye

HEALTH EFFECTS: Exposure Limits-yes

EYE EFFECTS: May cause irritation due to frostbite.

SKIN EFFECTS: May irritate the skin upon contact due to frostbite.

INHALATION EFFECTS: Inhalation of benzene in low concentrations can cause blood system disorders. 50-150 PPM caused headache, tiredness, nose and throat irritation. Severe inhalation over exposures may be fatal.

OTHER EFFECTS OF OVEREXPOSURE: Benzene can cause Hodgkin's disease, leukemia and lymphomas and is a known human carcinogen.

NFPA Hazard Codes:

Health: 1
Flammability: 0
Instability: 0

HMIS Hazard Codes:

Health: 1
Flammability: 0
Physical Hazard: 3

Rating System

0 = No Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

4. First Aid Measures

Inhalation: Immediately remove victim to fresh air. Immediate medical attention is mandatory in all cases of overexposure. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

Eye Contact: Persons with potential exposure to compressed gases should not wear contact lenses. Immediately flush with copious amounts of water for at least 15 minutes.

Skin contact: Immediately flush with copious amount of water for at least 15 minutes.

Ingestion: None

5. Fire Fighting Measures

Flash Point: N/Ap Gas

Autoignition Temperature: N/Ap

Flammable Limits: Nonflammable Gas

Lower: N/Ap

Upper: N/Ap

Extinguishing Media: Use what is appropriate for surrounding fire.

Special Fire fighting Instruction and Equipment: Wear self-contained breathing apparatus and full protective clothing. Keep fire from exposed cylinders and cool with water spray, If possible, stop the product flow.

Hazardous Combustion Products: None

Unusual Fire and Explosion Hazards: Cylinder rupture may occur under fire conditions.

6. Accidental Release Measures

Isolate hazard area, evacuate personnel and deny entry to unauthorized individuals.

Persons entering area should wear full faced NIOSH/MSHA approved self-contained breathing apparatus. Personnel should not re-enter area until benzene has sufficiently dispersed. Remove leaking cylinder to exhaust hood or safe outdoor area. Shut off cylinder if possible.

Specialized Equipment: Self contained breathing device.

7. Handling and Storage

Precautions To Be Taken In Handling: Secure cylinder when using to protect from falling.

Precautions To Be Taken In Storage: Protect cylinders from physical damage. Store in cool, dry, well ventilated area. Do not allow the temperature where cylinders are stored to exceed 125 degrees F.

8. Exposure Controls/Personal Protection

Engineering Controls: Provide adequate general and local exhaust ventilation to maintain concentrations below exposure limits.

Eye/Face Protection: Safety goggles or glasses as appropriate for the job.

Skin Protection: Protective gloves of material appropriate for the job.

Respiratory Protection: In case of leakage, use of self-contained breathing apparatus should be available for emergency use.

Other Protective Equipment: Safety Shoes

9. Physical And Chemical Properties

Appearance: Colorless gas

Odor: slight sweet odor

Physical State: Gas

Vapor Pressure: N/Ap

Vapor Density (Air = 1): 1

Boiling Point (C): N/Ap

Solubility In Water: Very slightly soluble

Specific Gravity (H₂O-1): Gas

Evaporation Rate: Gas

Odor Threshold: N/Ap

10. Stability and Reactivity

Stability: Stable under normal storage conditions.

Conditions To Avoid: Storage in poorly ventilated areas. Storage near a heat source.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: May produce small amounts of carbon monoxide, irritating aldehydes and ketones.

11. Toxicological Information

Inhalation:

Benzene is listed by OSHA, NTP, CAL/OSHA and IAEC as a cancer causing substance.

LC50 (rat), Inhalation of 10,000 PPM for 7 hours.

12. Ecological Information

Product does not contain Class I or Class II ozone depleting substances.

13. Disposal Considerations

Waste Disposal Method: Do not attempt to dispose of waste or unused quantities. Disposal of non-refillable cylinders must be done in accordance with federal, state and local regulations or return to Intermountain Specialty Gases.

14. Transport Information

Proper Shipping Name: Compressed Gas N.O.S. (Benzene, Air)

Hazard Class: 2.2

Identification Number: UN 1956

Shipping Label: Nonflammable Gas

15. Regulatory information

SARA Title III Notifications and Information: Release of benzene in quantities equal to or greater than the reportable quantity (RQ) of 10 pounds are subject to reporting to CERCLA.

Benzene is listed under Section 313 and is subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act (ERCRA) of 1986 and of 40 CFR 372.

SARA Title III – Hazard classes:
Sudden release of pressure hazard.

California Proposition 65:

This product contains ingredients known to the State of California to cause cancer or reproductive toxicity.

15.a. Agencies and Terms Which May be Pertinent to This Product

SARA	Superfund Amendments and Reauthorization Act
OSHA	Occupational Safety and Health Administration
DOT	Department of Transportation
TSCA	Toxic Substance Control Act

NTP	National Toxicology Program
ACGIH	American Conference of Governmental Industrial Hygienists
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TDG	Transportation of Dangerous Goods

16. Other Information

Other Precautions: Protect containers from physical damage. Do not deface cylinders or labels.

Abbreviations:

N/Ap – Not Applicable

N/Av – Not Available

SA – Simple Asphyxiant

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