

Praxair™ Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name:	CO ₂ Indicator Solutions for Hydrocarbon Detectors (MSDS No. P-4896-D)	Trade Name:	CO ₂ Indicator Solutions for Hydrocarbon Detectors
Chemical Name:	Not applicable	Synonyms:	Hydrocarbon detector indicator solutions, part nos. 5738-7090, -7100, -7115, -7150
Formula:	Mixture of water, xyleneol blue dye, sodium hydroxide, sodium carbonate, potassium chloride, and toluene	Chemical Family:	Not Applicable
Telephone:	Emergencies: 1-800-645-4633* CHEMTREC 1-800-424-9300* Routine: 1-800-PRAXAIR	Company Name:	Praxair, Inc. 39 Old Ridgebury Road Danbury CT 06810-5113

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

2. Composition / Information on Ingredients

INGREDIENT NAME	CAS NUMBER	PERCENT -AGE	OSHA PEL	ACGIH TLV-TWA
Water	7732-18-5	>98%*	None currently established	None currently established
Xyleneol blue dye	125-31-5	0.5%	None currently established	None currently established
Sodium hydroxide	1310-73-2	0.5%	2 mg/m ³	2 mg/m ³ (ceiling)**
Sodium carbonate	497-19-8	0.5%	None currently established	None currently established
Potassium chloride	7447-40-7	0.5%	None currently established	None currently established
Toluene	108-88-3	<0.5%*	200 ppm (See section 3.)	50 ppm

**The symbol ">" means "greater than; "<", less than."*

***Ceiling values are not Time-Weighted Average (TWA).*

This product contains sodium hydroxide and toluene, toxic chemicals subject to the reporting requirements of section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

3. Hazards Identification

EMERGENCY OVERVIEW

**CAUTION! irritating liquid and vapor.
May be harmful if inhaled or ingested.
Irritates the eyes and skin.**

**Self-contained breathing apparatus may be required by rescue workers.
Odor: Slightly aromatic hydrocarbon**

THRESHOLD LIMIT VALUE: OSHA PEL, Tolulene: 200 ppm 8-hr TWA, 300 ppm ceiling, 500 ppm max. peak above ceiling for 10 minutes. TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

INHALATION—No harm expected.

SKIN CONTACT—No harm expected.

SWALLOWING—No harm expected.

EYE CONTACT—May cause minimal irritation, seen as mild local redness.

EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE: No harm expected

OTHER EFFECTS OF OVEREXPOSURE: None known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: The toxicology and the physical and chemical properties of the components suggest that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION: None known.

CARCINOGENICITY: None of the components of this product is listed by NTP, OSHA, or IARC.

4. First Aid Measures

INHALATION: No emergency care anticipated.

SKIN CONTACT: Flush with water.

SWALLOWING: No harm expected.

EYE CONTACT: Flush with water. If discomfort persists, see a physician, preferably an ophthalmologist.

NOTES TO PHYSICIAN: *Treatment of overexposure should be directed at the control of symptoms and the clinical condition.*

NOTE: *These solutions are used in equipment to determine the hydrocarbon impurities in gaseous oxygen. Users must be familiar with the operation of and hazards associated with the equipment used with this liquid.*

5. Fire Fighting Measures

FLASH POINT (test method)	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
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FLAMMABLE LIMITS IN AIR, % by volume	LOWER	Not applicable	UPPER	Not applicable
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EXTINGUISHING MEDIA: CO₂ indicator solutions cannot catch fire. Use media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES:

CAUTION! Irritating liquid and vapor. Do not get on skin, in eyes, or on clothing.No special procedures anticipated. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CO₂ indicator solutions cannot catch fire. Heat of fire may build pressure in container, causing rupture. No part of a container should be subjected to temperatures above 125°F (51.1°C).

HAZARDOUS COMBUSTION PRODUCTS: Potential for small amounts of CO/CO₂. (See section 10.)

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

CAUTION! Irritating liquid and vapor. Do not get on skin, in eyes, or on clothing. Prevent runoff from contaminating surrounding environment. Use solid absorbent to pick up spilled material. Ventilate area of spill or move leaking container to a well-ventilated area.

WASTE DISPOSAL METHOD: Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in a cool, dry area, suitable for storage of chemical solutions. Store and use with adequate ventilation.

PRECAUTIONS TO BE TAKEN IN HANDLING: Protect containers from damage. For other precautions in using this product, see section 16.

8. Exposure Controls/Personal Protection

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST—Use a local exhaust ventilation system with sufficient air flow velocity to maintain concentration below TLV levels in the worker's breathing zone.

MECHANICAL (general)—Not recommended as a primary ventilation system to control worker's exposure.

SPECIAL—None

OTHER—None

RESPIRATORY PROTECTION: Use any full-face dust or mist mask where ventilation is not adequate to keep exposure below the permissible exposure limit and for up to 10 times the limit. For higher concentrations, a full-face, air-supplied respirator is recommended. Respiratory protection must conform to OSHA rules as specified in 29 CFR 1910.134.

SKIN PROTECTION: Wear chemically protective gloves made of neoprene or Viton® (fluorocarbon rubber, registered trademark of E.I. DuPont de Nemours & Co., Inc.) wherever there is a risk of contact with the solution. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133.

EYE PROTECTION: Safety glasses or protective goggles. Select in accordance with OSHA 29 CFR 1910.133.

OTHER PROTECTIVE EQUIPMENT: Protective clothing where needed. Select in accordance with OSHA 29 CFR 1910.132 and 1910.133. Regardless of protective equipment, never touch live electrical parts.

9. Physical and Chemical Properties

MOLECULAR WEIGHT: Not applicable	EXPANSION RATIO: Not applicable
SPECIFIC GRAVITY (H₂O=1): At 68°F (20°C) and 1 atm: 1.002 to 1.027	SOLUBILITY IN WATER: At 68°F (20°C): 100%
SPECIFIC GRAVITY (air=1): At 68°F (20°C) and 1 atm: 0.014	VAPOR PRESSURE: At 68°F (20°C): 0.3392 psig (17.54 mm Hg)
PERCENT VOLATILES BY VOLUME: >98%	EVAPORATION RATE (Butyl Acetate=1): Low
BOILING POINT (1 atm): 212°F (100°C)	pH: 7-9 (approximate range)
FREEZING POINT (1 atm): 32°F (0°C) to 31.1°F (-0.5°C)	
APPEARANCE, ODOR, AND STATE: Clear, blue liquid; slight, aromatic hydrocarbon odor.	

10. Stability and Reactivity

STABILITY:	Unstable		Stable	X
INCOMPATIBILITY (MATERIALS TO AVOID): None known.				
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition of sodium carbonate may produce very small quantities of carbon monoxide and/or carbon dioxide. These solutions are over 90% water.				
HAZARDOUS POLYMERIZATION:	May Occur		Will Not Occur	X
CONDITIONS TO AVOID: Heat. These solutions are stable at normal temperatures and pressures.				

11. Toxicological Information

See section 3.

12. Ecological Information

These solutions do not contain any Class I or Class II ozone-depleting chemicals. None of the solution components are listed as a marine pollutant by DOT.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Dispose of this product in an environmentally acceptable manner in full compliance with federal, state, and local regulations. Do not pour down drains, into sewers, or otherwise release into the environment. Place into lab packs for pickup by a licensed hazardous waste disposal service or use other authorized means. See section 6 for disposal following spills.

14. Transport Information

DOT/IMO SHIPPING NAME: Not regulated	HAZARD CLASS: Not applicable
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IDENTIFICATION NUMBER: None	PRODUCT RQ: Not applicable
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SHIPPING LABEL(s): Not required
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PLACARD (When required): Not required
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SPECIAL SHIPPING INFORMATION: None

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. FEDERAL REGULATIONS:

EPA (Environmental Protection Agency)

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (40 CFR Parts 117 and 302):

Reportable Quantity (RQ): Not applicable to this solution.

SARA: Superfund Amendment and Reauthorization Act:

- **SECTIONS 302/304:** Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of extremely hazardous substances (40 CFR Part 355):

Threshold Planning Quantity (TPQ): Not applicable to this solution.

Extremely Hazardous Substances (40 CFR 355): Not applicable to this solution.

- **SECTIONS 311/312:** Require submission of Material Safety Data Sheets (MSDSs) and chemical inventory reporting with identification of EPA hazard categories. The hazard categories for this products are as follows:

IMMEDIATE: Yes	PRESSURE: No
DELAYED: No	REACTIVITY: No
	FIRE: No

- **SECTION 313:** Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

The requirements of this section do not apply to this solution..

40 CFR 68: Risk Management Program for Chemical Accidental Release Prevention:

Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

Not applicable to this solution.

TSCA: Toxic Substances Control Act: All solution components are listed on the TSCA inventory.

OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION):

29 CFR 1910.119 : Process Safety Management of Highly Hazardous Chemicals: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

Not applicable to this solution.

STATE REGULATIONS:

CALIFORNIA: None of the components of this solution is listed by California under the Safe Drinking Water Toxic Enforcement Act of 1986 (Proposition 65) as a chemical known to cause cancer.

PENNSYLVANIA: This solution is subject to the Pennsylvania Worker and Community Right-To-Know Act (35 P.S. Sections 7301-7320).

16. Other Information

Be sure to read and understand all labels and instructions supplied with all containers of this product.

SPECIAL PRECAUTIONS: *Irritating liquid and vapor.* Do not get liquid or vapor in eyes, on skin, or on clothing. Have safety showers and eyewash fountains immediately available to exposed workers. Wash hands thoroughly after handling. *Store and use with adequate ventilation at all times.* (See section 8.) Keep container closed when not in use, even when empty.

NOTE: *Prior to using any plastics, confirm their compatibility with the components of this mixture.*

MIXTURES: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist, or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

HAZARD RATING SYSTEMS:

NFPA RATINGS:

HEALTH	= 0
FLAMMABILITY	= 0
REACTIVITY	= 0
SPECIAL	None

HMIS RATINGS:

HEALTH	= 0
FLAMMABILITY	= 0
REACTIVITY	= 0

Praxair asks users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents and contractors of the information on this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair MSDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current Praxair MSDSs for these products, contact your Praxair sales representative or local distributor or supplier. If you have questions regarding Praxair MSDSs, would like the form number and date of the latest MSDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (**Phone:** 1-800-PRAXAIR; **Address:** Praxair Call Center, Praxair, Inc., PO Box 44, Tonawanda, NY 14150-7891).

Praxair is a trademark of Praxair Technology, Inc.

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