

# MATERIAL SAFETY DATA SHEET

**IDENTITY:** FORMALIN 10% CARSON MILLONIG FORMULA

Product No. VT170

Manufactured by: Val Tech Diagnostics, Inc.  
LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

Tel: 412-826-5230

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Emergency No. 800-424-9300

HAZARDOUS COMPONENTS	CAS NO.	OSHA PEL	ACGIH TLV	OTHER	%
Formaldehyde, Formalin	50-00-0	0.75 PPM,8hrTWA	1 PPM(skin)		3.7%
Methyl Alcohol	67-56-1	200 PPM	200 PPM		1.2%
Sodium Hydroxide	1310-73-2	2 MG/M3	2 MG/M3		
Monosodium Phosphate	7558-80-7	15 MG/M3	10 MG/M3		

**DOT Labeling:** Formaldehyde Solutions (4%)

## PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 94.3 to 100 °C (201 to 212 °F)  
Vapor Pressure (mmHg): 23-26 MM Hg at 25 °C  
Vapor Density (Air=1): 1.0  
Specific Gravity (H2O=1): 1.10  
Melting Point: Polymerizes and separates below 0 °C and above 67 °C.  
Evaporation Rate (Butyl Acetate=1): Greater than 1  
Solubility in Water: complete  
Appearance/Color/Odor: Clear liquid with strong, pungent odor.

## FIRE AND EXPLOSION HAZARD DATA

Flash Point: >160 °F Method: PMCC  
Flammable limits: LEL 7.0% Formaldehyde  
UEL 37% Formaldehyde  
Extinguishing Media: Foam, water spray, carbon dioxide, or dry chemical.  
Special fire fighting procedures: Use self-contained breathing apparatus with full-face piece. Wear protective equipment.  
Unusual fire and explosion hazards: Forms hazardous fumes, carbon monoxide, carbon dioxide. Evacuate affected area. Cool container with water spray to absorb escaping fumes.

## REACTIVITY DATA

Stability: Stable  
Conditions to avoid: STORAGE AT HIGH TEMPERATURES  
Materials to avoid/Incompatibility: Strong oxidizing agents, caustics, strong alkalis, isocyanates, anhydrides, oxides, and inorganic acids.  
Hazardous Decomposition/Byproducts: Formaldehyde reacts with hydrochloric acid to form the potent carcinogen, bis-chloromethyl ether. Formaldehyde reacts with nitrogen dioxide, nitromethane, perchloric acid and aniline or when formaldehyde is mixed with strong oxidizers.  
Hazardous Polymerization: will not occur.

**Formalin 10% Carson Millonig Formula Continued.....**

## HEALTH HAZARD DATA

Routes of entry: Inhalation, skin, ingestion.

Health Hazards: Acute- Strongly irritating to skin, eyes, respiratory tract, and mucous membranes. Poison. May cause allergic reactions. May cause permanent eye damage. Inhalation (breathing): Harmful if inhaled. Skin contact: harmful if absorbed through skin, causes general tissue damage. Eye contact: Causes eye burns.

Chronic- Ingestion (swallowing) Fatal or may cause blindness.

Signs of Exposure: Irritation of skin eyes, respiratory tract, and mucous membranes from fumes. Ingestion causes severe gastrointestinal symptoms.

Emergency and First Aid Procedures:

**Eye Contact:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention.

**Skin Contact:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** If victim is conscious, give 2-4 glasses milk or water, then induce vomiting, give activated charcoal slurry. Seek medical attention.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult use oxygen.

Medical Conditions Aggravated by Exposure: Respiratory ailments, skin conditions, eye conditions.

Carcinogenicity: Listed as a carcinogen on the following: IARC, NTP, OSHA, ACGIH.

## TOXICOLOGICAL INFORMATION

Formaldehyde

Oral, rats: LD50 = 800 mg/kg

Inhalation, rats: LD50 = 590 mg/kg

Oral, mouse: LD50 = 42 mg/kg

Inhalation, mouse: LCLo = 900 mg/kg

Inhalation, rats: LCLo = 250 mg/kg

## PRECAUTIONS FOR SAFE HANDLING AND USE

**Precautions to be taken in handling and storage: Keep container closed. Keep away from heat and flame. Store at room temperature. Avoid freezing and/or temperatures above 120 °F.**

Spill or Release Procedures: Soak up small spills with earth, sand, or other noncombustible absorbent material and remove in covered metal containers. Dike large spills and neutralize with dilute (5%) solution of ammonia, sodium sulfate, or sodium bisulfite and remove. Flush area with plenty of water. Comply with federal, state and local regulations on reporting releases.

Spill or Release: "Reportable Quantity" (RQ) to National Response Center 1-800-424-8802, 40 CFR Part 302: Formaldehyde RQ (lbs) 100

Waste Disposal Methods: Consult local state and federal authorities for proper disposal methods.

## CONTROL MEASURES/PERSONAL PROTECTION

Respiratory Protection: Full face, self-contained breathing apparatus.

Eye Protection: Full-face shield, splash goggles.

Protective Gloves: Neoprene, nitrile, butyl, or polyvinyl.

Protective Clothing: Coveralls with long sleeves made of materials resistant to product.

Ventilation Requirements: Local exhaust, must comply with regulations.

Work and Hygienic Practices: Review the OSHA Formaldehyde Standard (29 CFR 1910.1048) for worker training, workplace monitoring, and medical surveillance requirements.

SARA TITLE III- In compliance with Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR Part 372 the following toxic chemicals are present: Formaldehyde

THE ABOVE INFORMATION IS BELIEVED TO BE TRUE AND CORRECT AT THIS TIME. HOWEVER NO GUARANTEE IS EXPRESSED OR IMPLIED.