

**OFI TESTING EQUIPMENT, INC.**  
**MATERIAL SAFETY DATA SHEET**

<b>SECTION I - PRODUCT AND COMPANY IDENTIFICATION</b>	
<b>Chemical Name:</b>	FORMALDEHYDE SOLUTION, 4%
<b>Trade Name:</b>	FORMALDEHYDE SOLUTION, 4%
<b>OFI Part No.</b>	213-00
<b>Formula:</b>	HCHO and CH <sub>3</sub> OH
<b>Manufacturer:</b>	OFI Testing Equipment, Inc. 1006 West 34 <sup>th</sup> Street Houston, TX 77018 U.S.A. (713) 880-9885
<b>In Case of Emergency Spills, Leaks, Fire, Exposure or Accident:</b>	In the USA, call INFOTRAC at 1-800-535-5053 day or night Outside the USA, call collect, (352) 323-3500
<b>SECTION II - COMPOSITION / INFORMATION ON INGREDIENTS</b>	
<b>CAS #:</b>	<b>CHEMICAL NAME</b>
50-00-0	Formaldehyde 4.0 %
<b>SECTION III - HAZARD IDENTIFICATION</b>	
<b>Emergency Overview:</b>	Poison! Danger! Suspect cancer hazard. May cause cancer. Risk of cancer depends on level and duration of exposure. Vapor harmful. Harmful if inhaled or absorbed through skin. Causes irritation to skin, eyes and respiratory tract. Strong sensitizer. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Flammable liquid and vapor.
<b>Inhalation:</b>	May cause sore throat, coughing, and shortness of breath. Causes irritation and sensitization of the respiratory tract. Concentrations of 25 to 30 ppm cause severe respiratory tract injury leading to pulmonary edema and pneumonitis. May be fatal in high concentrations.
<b>Ingestion:</b>	Can cause severe abdominal pain, violent vomiting, headache, and diarrhea. Larger doses may produce decreased body temperature, pain in the digestive tract, shallow respiration, weak irregular pulse, unconsciousness and death.
<b>Skin:</b>	Toxic. May cause irritation to skin with redness, pain, and possibly burns. Skin absorption may occur with symptoms paralleling those from ingestion. Formaldehyde is a severe skin irritant and sensitizer. Contact causes white discoloration, smarting, cracking and scaling.
<b>Eye Contact:</b>	Vapors cause irritation to the eyes with redness, pain, and blurred vision. Higher concentrations or splashes may cause irreversible eye damage.
<b>Chronic Exposure:</b>	Frequent or prolonged exposure to formaldehyde may cause hypersensitivity leading to contact dermatitis. Repeated or prolonged skin contact with formaldehyde may cause an allergic reaction in some people. Formaldehyde is a suspected carcinogen (positive animal inhalation studies)
<b>Aggravated by Exposure:</b>	Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance. Previously exposed persons may have an allergic reaction to future exposures.
<b>SECTION IV - FIRST AID MEASURES</b>	
<b>Inhalation:</b>	Remove to Fresh Air. If not Breathing, Give Artificial Respiration. If Breathing is Difficult, Give Oxygen. Get Medical Attention.
<b>Ingestion:</b>	If swallowed and the victim is conscious, dilute, inactivate, or absorb the ingested formaldehyde by giving milk, activated charcoal, or water. Any organic material will inactivate formaldehyde. Keep affected person warm and at rest. Get medical attention.
<b>Skin:</b>	In Case of Contact, Immediately Flush Skin with Plenty of Water for at Least 15 Minutes while Removing Contaminated Clothing and Shoes. Get Medical Attention Immediately. Wash Clothing Before Reuse. Thoroughly Clean Shoes before Reuse.
<b>Eyes:</b>	Immediately Flush Eyes with Gentle but Large Stream of Water for at Least 15 Minutes, Lifting Lower and Upper Eyelids Occasionally. Get Medical Attention Immediately.
<b>SECTION V - FIRE FIGHTING MEASURES</b>	
<b>Fire:</b>	Flash Point: 185 °F(85 °C) Combustible liquid and vapor! Gas vaporizes from solution and is flammable in air.
<b>Explosion:</b>	Above flash point, explosive vapor-air mixtures may be formed. Containers may explode when involved in a fire.
<b>Fire Extinguishing Media:</b>	Water spray, dry chemical, alcohol foam, or carbon dioxide.
<b>Special Information:</b>	In the event of fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray may be used to keep fire exposed containers cool. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

<b>SECTION VI - ACCIDENTAL RELEASE MEASURES</b>	
	Ventilate area of Leak or Spill. Wear Appropriate Personal Protective Equipment as Specified in Section 8. Isolate Hazard Area. Keep Unnecessary and Unprotected Personnel from Entering. Contain and Recover Liquid when Possible. Neutralize with Alkaline Material (Soda-Ash, Lime), then Absorb with an Inert Material (e.g., Vermiculite, Dry Sand, Earth), and place in a Chemical Waste Container. Do Not Use Combustible Materials, such as Saw Dust. Do Not Flush to Sewer! US Regulations (CERCLA) Require Reporting Spills and Releases to Soil, Water and Air in Excess of Reportable Quantities.
<b>SECTION VII - HANDLING AND STORAGE</b>	
	Keep in a Tightly Closed Container. Protect from Physical Damage. Store in a Cool, Dry, Ventilated Area away from Sources of Heat, Moisture and Incompatibilities. Inside storage should be in a standard flammable liquids storage room or cabinet. Separate from oxidizing agents. Wash Hands, Face, Forearms and Neck when Exiting Restricted Areas. Shower, Dispose of Outer Clothing, Change to Clean Garments at the End of the Day. Avoid Cross-Contamination of Street Clothes.
<b>SECTION VIII - EXPOSURE CONTROL / PERSONAL PROTECTION</b>	
<b>Ventilation System:</b>	A System of Local and/or General Exhaust is Recommended to Keep Employee Exposures Below the Airborne Exposure Limits. Local Exhaust Ventilation is Generally Preferred Because it can Control the Emissions of the Contaminant at its Source, Preventing Dispersion of it into the General Work Area.
<b>Airborne Exposure Limits:</b>	OSHA Permissible Exposure (PEL) 0.75 (TWA), 2 ppm (STEL), A2 suspected Carcinogen.
<b>Personal Respirators: (NIOSH APPROVED)</b>	If the Exposure Limit is Exceeded, a Half-Face Dust/Mist Respirator may be Worn for up to Ten Times the Exposure Limit or the Maximum use Concentration Specified by the Appropriate Regulatory Agency or Respirator Supplier, Whichever is Lowest. A Full-Facepiece Dust/Mist Respirator may be Worn up to 50 Times the Exposure Limit, or the Maximum use Concentration Specified by the Appropriate Regulatory Agency, or Respirator Supplier, Whichever is Lowest.
<b>Skin Protection:</b>	Wear Impervious Protective Clothing, Including Boots, Apron, Gloves, Lab Coat or Coveralls, as Appropriate, to Prevent Skin Contact.
<b>Eye Protection:</b>	Use Chemical Safety Goggles and/or Full Face Shield where Splashing is Possible. Maintain Eye Wash Fountain and Quick-Drench Facilities in Work Area.
<b>SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>Appearance / Odor:</b>	Clear, colorless solution / Slight pungent odor
<b>Solubility:</b>	Completely Soluble in Water
<b>Specific Gravity:</b>	1.0
<b>pH:</b>	No Information Found
<b>% Volatiles by Vol.:</b>	@ 70 °F (21 °C) 100%
<b>Melting Point:</b>	32 °F (01 °C)
<b>Boiling Point:</b>	212 °F (100 °C)
<b>Vapor Density (Air=1):</b>	Essentially the same as water
<b>Vapor Pressure (mmHg):</b>	Essentially the same as water
<b>SECTION X - STABILITY AND REACTIVITY</b>	
<b>General Reactivity:</b>	Stable under Ordinary Conditions of Use and Storage.
<b>Hazardous Decomposition:</b>	May form carbon dioxide, carbon monoxide, and formaldehyde when heated to decomposition.
<b>Incompatibilities:</b>	Oxidizing agents and alkalis. Reacts explosively with nitrogen dioxide at 356 °F (180 °C). Reacts violently with perchloric acid-aniline mixtures, and nitromethane. Reaction with Hydrochloric acid may form bis-chloromethyl ether, an OSHA regulated carcinogen.
<b>Hazardous Polymerization:</b>	Will Not Occur.
<b>SECTION XI - TOXICOLOGICAL INFORMATION</b>	
<b>Carcinogenic References:</b>	NTP Carcinogen - Known: No - Anticipated: Yes, IARC Category- 2A
<b>SECTION XII - ECOLOGICAL INFORMATION</b>	
<b>Environmental Fate:</b>	The following statements refer to the environmental fate of formaldehyde: When released into the soil, this material is expected to leach into groundwater. When released into water, this material is expected to readily biodegrade. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily degraded by photolysis. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life of less than 1 day.
<b>Environmental Toxicity:</b>	The following toxicity information is for the formaldehyde portion: 96 Hr LC50 fathead minnow: 24.1 mg/L (flow-through); 96 Hr LC50 bluegill: 0.10 mg/L (flow-through); 96 Hr EC50 water flea: 20 mg/L.

**SECTION XIII - DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**SECTION XIV - TRANSPORT INFORMATION**

**Shipping Name:** Formaldehyde Solution  
**Hazard Class:** 3  
**Identification No.:** UN2209, Packing Group III

**SECTION XV - REGULATORY INFORMATION**

Chemical Inventory Status – Part 1:	Ingredient	TSCA	EC	Japan	Australia
Formaldehyde (50-00-0)		Yes	Yes	Yes	Yes
Chemical Inventory Status – Part 2:	Ingredient	Korea	DSL	NDSL	Phil.
Formaldehyde (50-00-0)		Yes	Yes	No	Yes
Federal, State & International Regulations – Part 1:	Ingredient	-SARA 302- RQ	TPQ	-SARA 313- List	Chemical Catg.
Formaldehyde (50-00-0)		100	500	Yes	No
Federal, State & International Regulations – Part 2:	Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)	
Formaldehyde (50-00-0)		100	U122	No	
<b>Chemical Weapons Convention:</b>	No				
<b>TSCA 12 (b):</b>	No				
<b>CDTA:</b>	No				
<b>SARA 311/312:</b>	Acute: Yes    Chronic: Yes    Fire: Yes    Pressure: No    Reactivity: No				(Mixture / Liquid)
<b>Australian Hazchem Code:</b>	2SE				
<b>Poison Schedule:</b>	S6				

**SECTION XVI - OTHER INFORMATION**

**NFPA Rating:** HEALTH-3, FLAMMABILITY-2, REACTIVITY-0

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