



Material Safety Data Sheet

1. PRODUCT and COMPANY IDENTIFICATION

Product: **IPC Blue**TM
 Product Code(s): RMRIB
 Synonyms: Mixture
 Distributor: Innovative Pathology Concepts, Inc.
 PO Box 32287
 Baltimore, MD 21282

**IN CASE OF EMERGENCY
 24 HOUR CONTACT TELEPHONE
 CHEM-TEL: (800)255-3924**

All non-emergency questions may be directed to customer service (410)602-0472 or info@innovativepathology.com

2. COMPOSITION and INFORMATION on ACTIVE INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>Chemical Formula</u>	<u>Formula Weight</u>	<u>Hazardous</u>	<u>% by Weight</u>
Formaldehyde	50-00-0	HCHO	30.03	Yes	1.5-4
Methanol	67-56-1	CH ₃ OH	32.04	Yes	Negligible
Sodium Hydroxide	1310-73-2	NaOH	40.00	Yes	Negligible
Toluidine Blue	93-31-9	C ₁₅ H ₁₆ ClN ₃ S	305.83	Yes	Negligible

3. HAZARDS IDENTIFICATION

Emergency Overview:

DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT. STRONG SENSITIZER. MAY CAUSE BLINDNESS. CAN NOT BE MADE NON-POISONOUS. COMBUSTIBLE LIQUID AND VAPOR. SUSPECT CANCER HAZARD. CONTAINS FORMALDEHYDE WHICH MAY CAUSE CANCER. RISK OF CANCER DEPENDS UPON ON DURATION AND LEVEL OF EXPOSURE.

SAFETY RATINGS: Health: 3, Severe Reactivity: 2, Moderate
 Flammability: 1, Slight Contact: 3, Severe
Protective Equipment: Chemical Safety Glasses/Goggles, Shield, Lab Coat/Apron, Gloves, Local/General Ventilation.
Storage Code: Blue: Health

Potential Health Effects:

The perception of formaldehyde by odor and eye irritation becomes less sensitive with time as one adapts to formaldehyde. This can lead to overexposure if a worker is relying on formaldehyde's warning properties to alert him or her to the potential for exposure.

INHALATION:

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.

INGESTION:

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. Methanol component affects the optic nerve and may cause blindness.

SKIN CONTACT:

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.

EYE CONTACT:

Vapors cause irritation to the eyes with redness, pain, and blurred vision. Higher concentrations or splashes may cause irreversible eye damage.

POTENTIAL CHRONIC HEALTH EFFECTS:

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. Vision impairment and enlargement of liver may occur from methanol component. Formaldehyde is a suspected carcinogen (positive animal inhalation studies).

MEDICAL CONDITIONS GENERALLY AGGRAVATED by EXPOSURE:

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.

4. FIRST AID MEASURES

INHALATION:

Remove to fresh air. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. **GET MEDICAL ATTENTION IMMEDIATELY.**

INGESTION:

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 IMMEDIATELY.** If vomiting occurs, keep head lower than hips.

SKIN CONTACT:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. **GET MEDICAL ATTENTION IMMEDIATELY.**

EYE CONTACT:

Check for and remove contact lenses. 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.**

NOTE to PHYSICIAN:

Monitor arterial blood gases and methanol levels after significant ingestion. Hemodialysis may be effective in formaldehyde removal. Use formic acid in urine and formaldehyde in blood or expired air as diagnostic tests.

5. FIRE FIGHTING MEASURES

NFPA RATINGS: Health: 3 Flammability: 1 Reactivity: 0

FIRE:

Flash point: 85°C (185°F) CC
Combustible liquid and vapor!

EXPLOSION:

Above the flash point, explosive vapor-air mixtures may be formed. Containers may explode when involved in a fire.

FIRE EXTINGUISHING MEDIA:

Water spray, dry chemical, alcohol foam, or carbon dioxide.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece 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.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment as specified in the Exposure Control and Personal Protection Section 8. Use non-sparking tools and equipment. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth), and place in a suitable container for reclamation or disposal. Do not use combustible materials, such as sawdust. Do not flush to sewer. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800)424-8802.

7. HANDLING and STORAGE

Store in a cool, dry, ventilated area, away from flame, sources of ignition and heat. Keep containers tightly closed and upright. Protect from physical damage. Separate from oxidizing materials. Keep out of direct sunlight, separate from oxidizing materials and away from incompatibles. Protect from freezing. Containers of this material may be hazardous when empty since they retain product residues (vapor, liquids); observe all warnings and precautions listed for the product. Storage and use areas should be non-smoking. Wash thoroughly after handling. Do not eat, drink or smoke in workplace.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS:

Formaldehyde:

OSHA Permissible Exposure Limit (PEL): 0.75 ppm (TWA), 2 ppm (STEL), 0.5 ppm (TWA) action level for formaldehyde
ACGIH Threshold Limit Value (TLV): 0.3 ppm Ceiling formaldehyde, Sensitizer, A2 Suspected Human Carcinogen

VENTILATION SYSTEM:

A system of local and/or general ventilation is recommended to keep employee exposure below airborne limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion into the general work area.

PERSONAL RESPIRATORS (NIOSH) APPROVED:

If the exposure limit is exceeded and engineering controls are not feasible, wear an appropriate respirator with cartridge for the hazardous material being handled. All respirators should be approved and certified. For emergencies or instances where the exposure levels are not known, use a full face piece positive pressure, air supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen deficient atmospheres.

SKIN PROTECTION:

Wear protective clothing, gloves, lab coat or apron, as appropriate, to prevent skin contact.

EYE PROTECTION:

Use chemical safety glasses/goggles and/or a full face shield where splashing is possible. Maintain approved eye wash station and quick drench facilities in work area.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE:	Blue liquid.
ODOR:	Pungent odor.
SOLUBILITY:	Miscible in water.
SPECIFIC GRAVITY:	No information found.
pH:	No information found.
% VOLATILES by VOLUME:	100%.
BOILING POINT:	No information found.
MELTING POINT:	No information found.
VAPOR DENSITY (Air =1):	Essentially the same as water.
VAPOR PRESSURE (mm Hg):	Essentially the same as water.
EVAPORATION RATE (BuAc=1):	Essentially the same as water.

10. STABILITY and REACTIVITY

STABILITY:

Stable under ordinary conditions of use and storage.

HAZARDOUS DECOMPOSITION PRODUCTS:

May form carbon dioxide, carbon monoxide, and formaldehyde when heated to decomposition.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Incompatible with oxidizing agents and alkalis. Reacts explosively with nitrogen dioxide at ca. 180°C (356°F). Reacts violently with perchloric acid, perchloric acid-aniline mixtures, and nitromethane. Reaction with hydrochloric acid may form bis-chloromethyl ether, an OSHA regulated carcinogen.

CONDITIONS to AVOID:

Heat, flames, ignition sources, sunlight, and incompatibles.

11. TOXICOLOGICAL INFORMATION

Formaldehyde:	Oral rat LD50:	100 mg/kg.
	Inhalation rat LC50:	203mg/m3.
	Skin rabbit LD50:	270uL/kg.

Irritation Data, standard Draize: Eye rabbit, 750 µg (severe); investigated as a tumorigen, mutagen and reproductive effector.

Cancer Status: an OSHA regulated carcinogen.

Investigated as a tumorigen, mutagen, reproductive effector.

Cancer Lists

-----NTP Carcinogen-----

Ingredient	Known	Anticipated	IARC Category
Formaldehyde (50-00-0)	No	Yes	2A

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

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 bio-accumulate. When released into the air, this material is expected to be readily degraded by reaction with photo-chemically 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.

ENVIRONMENTAL TOXICITY:

Formaldehyde:
 LC50 Fathead Minnow: 24.1 mg/L/96 hr (flow through).
 LC50 Bluegill: 0.10 mg/L/96 hr (flow through).
 LC50 Water Flea: 20 mg/L/96 hr.

13. DISPOSAL INFORMATION

Whatever cannot be saved for recovery or recycling should be handled as potentially hazardous waste and disposed of or incinerated at an approved waste disposal 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.

14. TRANSPORT INFORMATION

TRANSPORT (Land, DOT):
 Not regulated.

15. 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	TSCA
Formaldehyde (50-00-0)	100	261.33 U122	8 (d) No

16. OTHER INFORMATION

PRODUCT USE:

For manufacturing, industrial and laboratory use only; not for household use.

DISCLAIMER:

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