

SAFETY DATA SHEET

10% BUFFERED FORMALIN PHOSPHATE



SDS Revision Date: 05/22/2015

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Identity	10% Buffered Formalin Phosphate
Alternate Names	Tissue Preservative Chemical, Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses	Tissue Preservative
Application Method	See Technical Data Sheet

1.3 Details of the supplier of the safety data sheet

Company Name	Hydrol Chemical Company, Inc. 520 Commerce Drive Yeadon, PA 19050
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1.4 Emergency telephone number

CHEMTREC (USA) Customer Service	(800) 424-9300
Hydrol Chemical Company, Inc.	(800) 345-8200 (610) 622-3603

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids 4; H227	Combustible liquid.
Acute toxicity 4; H302	Harmful if swallowed.
Skin corrosion 2; H315	Causes skin irritation.
Eye damage 1; H318	Causes serious eye damage.
Skin sensitivity 1; H317	May cause an allergic skin reaction.
Carcinogenicity 2; H351	Suspected of causing cancer.
STOT – single exposure 1; H370	Causes damage to organs.

2.2 GHS Label elements, including precautionary statements

Pictogram: 

Signal word: **Danger**

Hazard statements:

H227 Combustible liquid.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H402 Harmful to aquatic life.

Precautionary statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat / sparks / open flames / hot surfaces – No smoking.
P260 Do not breathe dust / fume / gas / mist / vapors / spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves / eye protection / face protection.

Response statements:

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P321 Specific treatment (see information on this label).
P330 Rinse mouth.
P333+313 IF skin irritation or a rash occurs: Get medical advice or attention.
P362 Take off contaminated clothing and wash before reuse.
P370+378 In case of fire: Use alcohol resistant foam, CO2, powder, water spray for extinction. Do not use water jet.

Storage statements:

P403+235 Store in a well ventilated space. Keep cool.
P405 Store locked up.

Disposal statements:

P501 Dispose of contents / container in accordance with local / national regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances Regulations.

<u>Ingredient / Chemical Designations</u>	<u>Weight %</u>	<u>GHS Classification</u>	<u>Notes</u>
Formaldehyde CAS Number: 000050-00-0	1.0 – 5.0	Acute Toxicity 3; H331 Acute Toxicity 3; H311 Acute Toxicity 3; H301 Carcinogenicity 1B; H350 Mutagenicity 2; H341 Skin Corrosivity 1B; H314 Skin Sensitivity 1; H317	(1)(2)

Methanol
CAS Number: 000067-56-1

1.0 – 5.0

Flammable Liquid 2; H225
Acute Toxicity 3; H331
Acute Toxicity 3; H311
Acute Toxicity 3; H301
STOT SE 1; H370

(1)(2)

(1) Substance classified with a health or environmental hazard.

(2) Substance with a workplace exposure limit.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General: Consult a physician. Show this Safety Data Sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: Move victim to fresh air. Apply artificial respiration if victim is not breathing. Consult a physician.

Eyes: Irrigate copiously with clean, fresh water for at least 15 minutes, holding eyelids apart, and seek medical attention. Continue to rinse eyes during transport to hospital.

Skin: In case of contact with substance, wash off with soap and water. Consult a physician.

Ingestion: DO NOT induce vomiting. Never give anything by mouth to someone who is unconscious. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: Causes damage to organs.

Eyes: Causes serious eye damage.

Skin: May cause an allergic skin reaction.

Ingestion: Harmful if swallowed.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Dry chemical, foam, carbon dioxide, and water fog.

5.2 Special hazards arising from the substance or mixture

Carbon oxides.

5.3 Advice for fire-fighters

Wear positive pressure self-contained breathing apparatus (SCBA) if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Water spray may reduce vapor, but may not prevent ignition in closed spaces.

6.2 Environmental precautions

Do not allow spills to enter drains or watercourses.

6.3 Methods and material for containment and cleanup

Contain spillage.

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

See Section 2 for further details.

7.2 Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Avoid contact with strong oxidizers / alkalis / mineral acids / phenol & urea.

See Section 2 for further details.

7.3 Specific end use(s)

No data available.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Exposure

<u>Ingredient / Chemical Designations</u>	<u>Source</u>	<u>Value</u>
Formaldehyde CAS Number: 0000050-00-0	OSHA ACGIH NIOSH Supplier	TWA 0.75 ppm, STEL 2 ppm TWA 0.3 ppm Ceiling: 1 ppm S, A2, 1 Ca TWA 0.016 ppm C 0.1 ppm (15 min) No established limit
Methanol CAS Number: 0000067-56-1	OSHA ACGIH NIOSH Supplier	TWA 200 ppm (260 mg/m ³) TWA 200 ppm, STEL 250 ppm Skin TWA 200 ppm (260 mg/m ³), STEL 250 ppm (325 mg/m ³) Skin No established limit

Carcinogen Data

<u>Ingredient / Chemical Designations</u>	<u>Source</u>	<u>Value</u>
Formaldehyde CAS Number: 0000050-00-0	OSHA NTP IARC	Select Carcinogen: Yes Known: Yes; Suspected: Yes Group 1: Yes; Group 2a, 2b, 3, 4: No
Methanol CAS Number: 0000067-56-1	OSHA NTP IARC	Select Carcinogen: No Known: No; Suspected: No Group 1, 2a, 2b, 3, 4: No

8.2 Exposure controls

Respiratory	Not necessary where area is properly ventilated.
Eyes	Wear safety eyewear; safety glasses, goggles, or visors to protect against splashing liquid.
Skin	Wear overalls which cover the body, arms, and legs. Skin should not be exposed. All parts of the body should be washed after contact. Wear PVC, vinyl, nitrile, or latex gloves.
Engineering Controls	Provide adequate ventilation. If the use of local exhaust ventilation is insufficient to maintain vapor levels below occupational exposure limits, suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene. Wash hands before eating, drinking, smoking, or toileting. Promptly remove soiled clothing; wash thoroughly before reuse.

See Section 2 Precautionary Statements for further details.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, water white liquid
Odor	Pungent
Odor threshold	No data available
pH	6.9 – 7.1
Melting pt. / freezing pt.	No data available
Initial boiling pt. and boiling range	100C (212°F)
Flash point (TCC)	85.0C (185°F)
Evaporation rate (Bu Acetate = 1)	Less than 1
Flammability (solid, gas)	Not applicable
Upper/Lower flammability or explosion limits	Lower explosive limit: 7% Upper explosive limit: 73%
Vapor pressure (Pa)	53 hPa (40 mm Hg) @ 39C (102°F)
Vapor density	No data available
Specific gravity	1.080 @ 25C (77°F)
Solubility in water	Complete
Partition coefficient n-octanol/water (log Pow)	No data available
Auto-ignition temperature (C)	No data available
Decomposition temperature (C)	No data available
Viscosity (cps)	No data available

9.2 Other information

No other relevant information.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Hazardous polymerization will not occur.

10.2 Chemical stability

Stable under recommended storage/handling conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Avoid heat and open flame.

10.5 Incompatible materials

Avoid contact with strong oxidizers, strong alkalis, strong mineral acids, phenol & urea.

10.6 Hazardous decomposition products

Incomplete combustion may also produce irritating smoke, and/or toxic vapors or gases.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents greater than the occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidneys, liver, and CNS. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the substance may cause removal of natural fat from the skin resulting in dryness, irritation, and possible non-allergic dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Ingredient / Chemical Designations	Oral LD50 (mg/kg)	Skin LD50 (mg/kg)	Inhalation Vapor LD50 (mg/L/4hr)	Inhalation Dust/Mist LD50 (mg/L/4hr)	Inhalation Gas LD50 (ppm)
Formaldehyde CAS Number: 0000050-00-0	800.00, Rat - Category: 4	270.00, Rabbit - Category: 3	0.578, Rat - Category: 2	No data available	168.00, Rat - Category: N/A
Methanol CAS Number: 0000067-56-1	143.00, Human - Category: 3	15,800.00, Rabbit - Category: N/A	128.00, Rat - Category: N/A	No data available	64,000.00, Rat - Category: N/A

Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed
Skin Corrosion / Irritation	2	Causes skin irritation
Eye Damage / Irritation	1	Causes serious eye damage
Sensitization (respiratory)	-	N/A
Sensitization (skin)	1	May cause an allergic reaction
Germ Toxicity	-	No data available
Carcinogenicity	2	Suspected of causing cancer
Reproductive Toxicity	-	No data available
Specific Target Organ Systemic Toxicity (single exposure)	1	Causes damage to organs
Specific Target Organ Systemic Toxicity (repeated exposure)	-	N/A
Aspiration Hazard	-	N/A

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

Aquatic Ecotoxicity

Ingredient / Chemical Designations	96 hr LC50 Fish (mg/l)	48 hr EC50 Crustacean (mg/l)	ErC50 Algae (mg/l)
Formaldehyde CAS Number: 0000050-00-0	1.41, Oncorhynchus mykiss	5.80, Daphnia pulex	0.788 (96 hr), Ulva pertusa
Methanol CAS Number: 0000067-56-1	100.00, Pimephales promelas	10,000.00, Daphnia magna	16.912 (96 hr), Ulva pertusa

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations enacted under the Control of Pollution Act and the Environmental Protection Act.

Using information supplied within this SDS, advice should be obtained from the Waste Regulation Authority whether any special local municipal waste regulations apply.

14. TRANSPORTATION INFORMATION

14.1 Transport Classes

DOT (Domestic Surface Transportation)

NA Number: 1993

DOT Proper Shipping

Name: Combustible liquid, n.o.s.

DOT Shipping Class: NONE

Packing Group: III

Reportable Quantity: 2500 lbs RQ

IMO / IMDG (Ocean Transportation)

Not dangerous goods

14.2 Environmental hazards

DOT: N/A

15. REGULATORY INFORMATION

Overview The data provided in this section includes select regulations, and is not inclusive of all regulations that may be applicable to this product. All ingredients of this product are listed on the TSCA Inventory, or are not required to be listed.

US EPA Tier II Hazards	Fire:	Yes
	Sudden Pressure Release:	No
	Reactivity:	No
	Immediate Health:	Yes
	Delayed Health:	Yes

EPCRA 311/312 Chemicals and RQ (>0.1%)

Formaldehyde (100 lbs)
Methanol (5,000 lbs)

EPCRA 302 Extremely Hazardous (>0.1%)

Formaldehyde

EPCRA 313 Toxic Chemicals (>0.1%)

Formaldehyde
Methanol

Proposition 65 - Carcinogens (>0.1%)

Formaldehyde

Proposition 65 - Developmental Toxins (>0.0%)

None listed

Proposition 65 - Female Reproductive Toxins (>0.0%)

None listed

Proposition 65 - Male Reproductive Toxins (>0.0%)

None listed

NJ RTK Substances (>1.0%)

Formaldehyde
Methanol

PA RTK Substances (>1.0%)

Formaldehyde
Methanol

16. OTHER INFORMATION

All information contained herein is based upon data believed to be correct. However, no guarantee, expressed or implied, is made with respect to the information contained within. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to this product. Users of this product must comply with all health and safety laws and regulations applicable.

The full text of the phrases appearing in section 3 is as follows:

H225 Highly flammable liquid and vapor
H301 Toxic if swallowed
H311 Toxic in contact with skin
H314 Causes severe skin burns
H317 May cause an allergic skin reaction
H331 Toxic if inhaled
H341 Suspected of causing genetic defects
H350 May cause cancer
H370 Causes damage to organs

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