



## Safety Data Sheet

**Creation Date:** 10-25-2015

**Revision Date:** 12-14-2018

**Revision Number:** 2

### 1. IDENTIFICATION

**Product Name:** 10% Neutral Buffered Formalin  
**Catalog No:** NBF03-32R, NBF03-40R, NBF03-1G  
**Other Names/Synonyms:** No information available  
**Recommended Use:** Laboratory chemicals.  
**Uses advised against:** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

**Company:** TissuePro Technology  
**Address:** 2153 SE Hawthorne Rd, Gainesville, FL 32641  
**Telephone Number:** 352-213-4255  
**Fax Number:** 352-393-6015

### 2. HAZARD (S) IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<b>Causes skin corrosion/irritation</b>	<b>Category 2</b>
<b>Serious Eye Damage/Eye Irritation</b>	<b>Category 1</b>
<b>Skin Sensitization</b>	<b>Category 1</b>
<b>Germ Cell Mutagenicity</b>	<b>Category 1</b>
<b>May cause cancer/Carcinogenicity</b>	<b>Category 1A</b>
<b>Specific target organ toxicity (single exposure)</b>	<b>Category 1</b>
<b>Target Organs – Respiratory system, Central Nervous system (CNS)</b>	
<b>Specific target organ toxicity (repeated exposure)</b>	<b>Category 2</b>
<b>Target Organs – Kidney, liver, spleen, Blood.</b>	

#### Label Elements

#### Signal Word

Danger



### **Hazard Statements**

Causes serious Eye Damage/Eye Irritation  
Causes Skin irritation  
May cause respiratory irritation  
May cause drowsiness or dizziness  
May cause an allergic skin reaction  
May cause cancer  
Suspected of causing genetic defects  
Causes damage to organs  
May cause damage to organs through prolonged or repeated exposure



### **Precautionary Statements**

#### **Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Do not breathe dust/fume/gas/mist/vapors/spray  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area

#### **Response**

IF exposed: Call a POISON CENTER or doctor/physician

#### **Inhalation**

IF INHALED: Removed victim to fresh air and kept at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell

#### **Skin**

IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse  
If skin irritation or rash occurs: Get medical advice/attention

#### **Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately Call a POISON CENTER or doctor/physician

#### **Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### **Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazard not otherwise classified (HNOC)**



Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains substance which are hazardous for the environment.

Chemical waste generators must determine whether a discarded chemical is classified as hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**WARNING! This product contains a chemical known in the State of California to cause cancer, birth defects or other reproductive harm.**

WARNING. Cancer – <https://www.p65warnings.ca.gov/>.

**3. COMPOSITION/INGREDIENTS**

Chemical Name	CAS Number	Weights %
Formaldehyde	50-00-0	3.7-4%
Methyl alcohol	67-56-1	<0.2%
Sodium phosphate, dibasic	7558-79-4	<1%
Sodium phosphate, monobasic	7558-80-7	<1%
Water and non-hazardous substances	7732-18-5	93-95%
	<b>Total</b>	<b>100%</b>

*We certify that the above product is composed of the following ingredients and does not have any other components.*

**4. FIRST AID MEASURES**

- General** Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
- Eye** Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
- Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
- Ingestion** Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Most important symptoms/effects** Causes eye burns. May cause allergic skin reaction. Breathing difficulties. . Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Notes to Physician** Treat symptomatically

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.



<b>Unsuitable Extinguishing Media</b>	No information available
Flash Point	> 93.3 °C / > 199 °F
Method -	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No data available
<b>Sensitivity to Static Discharge</b>	No data available

**Specific Hazards Arising from Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and source of ignition. Risk of ignition.

**Hazardous Combustion Products**

Formaldehyde Methanol Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
<b>3</b>	<b>1</b>	<b>0</b>	<b>N/A</b>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Evacuate personal to safe areas.
<b>Environmental Precautions</b>	Keep people away from and upwind of spill/leak. Should not be released into environment. Do not flush into surface water or sanitary sewer system. See section 12 for additional ecological information

**Methods for Containment and clean:** Soak up with inert absorbent material. Keep in suitable, closed container for disposal.

**Spills and Disposal:** Material may be slippery when spilt. Walk cautiously. Ventilate area. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this SDS. Bund area using sand or soil - to prevent run off into drains and waterways. Use absorbent (soil, sand, vermiculite or other inert material). Collect and seal in properly labeled containers for disposal. Remainder of material can be washed to drain with plenty of water.

**Fire/Explosion Hazard:** If safe to do so, move undamaged containers from fire area.  
Hazardous Decomposition Products: Decomposes on heating emitting oxides of carbon. Fire Fighting Procedures: Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.  
Extinguishing Media: Use extinguishing media suitable for surrounding fire situation.



**7. HANDLING AND STORAGE**

**Handling:** Use only under a chemical fume hood. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest.

**Storage:** Keep containers tightly closed in dry, cool and well-ventilated place when not using the product. Store in original packages as approved by manufacturer.

**8. EXPOSURE CONTROL/PERSONAL PROTECTION**

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Formaldehyde	TWA: 0.1 ppm STEL: 0.3 ppm	(Vacated) TWA: 3 ppm (Vacated) PEL: 10 ppm (Vacated) Ceiling: 3 ppm TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm TWA: 0.016 ppm Ceiling: 0.1 ppm	Ceiling: 2 ppm Ceiling: 3 mg/m3
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m3 (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m3 Skin TWA: 0.75 ppm STEL: 2 ppm	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m3 STEL: 250 ppm STEL: 325 mg/m3	TWA: 200 ppm TWA: 260 mg/m3 STEL: 250 ppm STEL: 310 mg/m3

*Legend*  
ACGIH – American Conference of Governmental Industrial Hygienists  
OSHA – Occupational Safety and Health Administration  
NIOSH IDLH – The National Institute of Occupational Safety and Health Immediately Dangerous to life or Death

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles.

**Skin and body protection** Long sleeved clothing.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.



<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Eye/face Protection</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles.
<b>Skin and body protection</b>	Long sleeved clothing.
<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical Description and Properties**

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	Clear Liquid/ Colorless
<b>Odor:</b>	Characteristic formaldehyde
<b>Odor Threshold:</b>	No information available
<b>pH</b>	<b>7</b>
<b>Melting Point/Range:</b>	No data available
<b>Boiling Point/Range:</b>	Not applicable
<b>Flash Point:</b>	> 93.3 °C / > 199.9 °F
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	Not applicable
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Specific Gravity</b>	No information available
<b>Solubility</b> miscible	
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No information available
<b>Molecular Formula</b>	Solution

**10. STABILITY AND REACTIVITY**

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat.
<b>Incompatible Materials</b>	Strong oxidizing agents, Strong acids, Strong bases
<b>Hazardous Decomposition Products (CO2)</b>	Formaldehyde, Methanol, Carbon monoxide (CO), Carbon dioxide
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.



11. TOXICOLOGY INFORMATION

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Table with 4 columns: Component, LD50 Oral, LD50 Dermal, LD50 Inhalation. Rows include Water, Formaldehyde, Methyl alcohol, Sodium phosphate (dibasic and monobasic).

Toxicologically Synergistic Products No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation

Irritating to eyes, respiratory system and skin

Sensitization

No information available

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Table with 7 columns: Component, CAS-No, IARC, NTP, ACGIH, OSHA, Mexico. Rows include Water, Formaldehyde, Methyl alcohol, Sodium phosphate (dibasic and monobasic).

IARC: (International Agency for Research on Cancer)

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)

Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen

Mexico - Occupational Exposure Limits - Carcinogens

Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen



A3 - Confirmed Animal Carcinogen  
A4 - Not Classifiable as a Human Carcinogen  
A5 - Not Suspected as a Human Carcinogen

**Mutagenic Effects** Mutagenic effects have occurred in humans.  
**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.  
**Developmental Effects** Developmental effects have occurred in experimental animals.  
**Teratogenicity** Teratogenic effects have occurred in experimental animals.  
**STOT - single exposure** Respiratory system, Central nervous system (CNS)  
**STOT - repeated exposure** Kidney Liver spleen Blood  
**Aspiration hazard** No information available  
**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available  
**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals. The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. Contains a substance which is: Toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtoc	Water Flea
Water	Not listed	Leuciscus idus: LC50 = 15 mg/L 96h	Not listed	EC50 = 20 mg/L 96h EC50 = 2 mg/L 48h
Formaldehyde	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96 h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h

**Persistence and Degradability** Miscible with water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Water	-0.35
Formaldehyde	-0.74

**13. DISPOSAL CONSIDERATION**

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.





**14. TRANSPORT INFORMATION**

DOT Not regulated  
 TDG Not regulated  
 IATA Not regulated  
 IMDG/IMO Not regulated

**15. REGULATORY INFORMATION**

**All of the components in the product are on the following Inventory lists: X = listed International Inventories**

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Formaldehyde	X	X	-	200-001-8	-		X	X	X	X	X
Methyl alcohol	X	X	-	200-659-6	-		X	X	X	X	X
Sodium phosphate, dibasic	X	X	-	231-448-7	-		X	X	X	X	X
Sodium phosphate, monobasic	X	X	-	231-449-2	-		X	X	X	X	X

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule..

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Formaldehyde	50-00-0	3.5 -4	0.1
Methyl alcohol	67-56-1	1.2	1

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)**

Component	CWA - Hazardous Substance	CWA - Reportable Quantities	CWA - Toxic Pollutans	CWA - Priority Pollutans
Formaldehyde	x	100 lb	-	-
Sodium phosphate, dibasic	x	500 lb	-	-



**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Formaldehyde	x	-	-
Methyl alcohol	x	-	-

**OSHA Occupational Safety and Health Administration**

Component	Specifically Regulated Chemical	Highly Hazardous Chemical
Formaldehyde	2 ppm 0.5 ppm Action level 0.75 ppm TWA	TQ: 1000 lb

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substance RQs	CERCLA EHS RQs
Formaldehyde	100 lb	100 lb
Methyl alcohol	5000 lb	-
Sodium phosphate, dibasic	5000 lb	-

**California Proposition 65** This product contains the following proposition 65 chemicals

Component	CAS-No	California Prop.65	Prop 65 NSRL	Category
Formaldehyde	50-00-0	Carc, (Gaseous only)	40 ug/day	Carcinogen
Methyl alcohol	67-56-1	Developmental	-	Developmental

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	X	-	-
Formaldehyde	X	X	X	x	x
Methyl alcohol	X	X	X	x	x
Sodium phosphate, dibasic	X	X	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product contains the following DHS chemicals:



Component	DHS Chemical Facility Anti-Terrorism Standard
Formaldehyde	11250 lb STQ (solution)
Sodium phosphate, dibasic	2000 lb STQ

**Other International Regulations**

**Mexico** - Grade Slight risk, Grade 1

**16. OTHER INFORMATION**

Prepared by

**TissuePro Technology**

**Address:** 2153 SE Hawthorne Rd, Gainesville, FL 32641

**Telephone Number:** 352-213-4255

**Fax Number:** 352-393-6015

**Email:** Customerservice@tissueprotech.coCreation Date 17-Nov-2015

Revision Date 12-Dec-2018

Print Date 14-Feb-2018

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard Treplacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is believed to be accurate and represents the best information currently available to us. The information given is design only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

**End of the SDS**

-----