



MATERIAL SAFETY DATA SHEET (MSDS)

Kit Name: VitroView™ 10% Neutral Buffered Formalin Fixative Solution

SKU #: VB-9005

Revision Date: 12-19-2025

Components:

VB-9005	10% Neutral Buffered Formalin Fixative Solution
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VB-9005 10% Neutral Buffered Formalin Fixative Solution MSDS

1. Identification of the Substance/Mixture and Company

Identification of the substance or mixture

Product Name 10% Neutral Buffered Formalin Fixative Solution
Product number VB-9005
Product Description Component

Manufacturer/Supplier

VitroVivo Biotech, LLC. 405 E Gude Dr. Suite 214, Rockville, MD 20850
Phone: 301-500-0499 Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Composition

Chemical characterization:

Dangerous components:

CAS: 50-00-0	Formaldehyde	3%-4%
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3. Hazards Identification

Label Elements

Signal Word: Danger

Hazard Statements:

May be corrosive to metals
Harmful if swallowed
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Harmful if inhaled
May cause cancer
Causes damage to organs
May cause respiratory irritation.
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 after handling.
Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated.
Do not breathe dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Keep only in original container

Response:

Immediately call a POISON CENTER or doctor/physician,

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing 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.

Ingestion

Rinse mouth, Do NOT induce vomiting.

Spills

Absorb spillage to prevent material damage.

Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive resistant polypropylene container with a resistant inliner. Store in a dry place.

Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)**Other hazards**

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

4. First Aid Measures**Eye Contact:**

Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.

Wash contaminated clothing before reusing.

Inhalation:

Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

5. Firefighting Measures**Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical. alcohol-resistant foam.

Unsuitable Extinguishing Media

No information available.

Flash Point

N/A

Method -

N/A

Autoignition Temperature

N/A

Explosion Limits

Upper

N/A

Lower

N/A

Sensitivity to Mechanical Impact

N/A

Sensitivity to Static Discharge

N/A

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

None known

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health: 3 Flammability: 1 Instability: 0 Physical hazard: N/A

6. Accidental Release Measures**Personal Precautions**

Do not get in eyes, on skin, or on clothing.

Use personal protective equipment. Evacuate personnel to safe.

Keep people away from and upwind of spill/leak.

Environmental Precautions

See Section 12 for additional ecological information.

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and Storage**Handling:**

away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust.

Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label.

Storage:

Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. Exposure Controls/Personal Protection**Control parameters****Formaldehyde, 37% w/w (50-00-0)**

ACGIH	ACGIH Ceiling (mg/m ³)	0.37 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	0.75 ppm
OSHA	OSHA PEL (STEL) (ppm)	2 ppm
IDLH	US IDLH (ppm)	20 ppm
NIOSH	NIOSH REL (TWA) (ppm)	0.016 ppm
NIOSH	NIOSH REL (ceiling) (ppm)	0.1 ppm 15 min

Water (7732-18-5) N/A

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration
 NIOSH IDLH - The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Exposure controls

Appropriate engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
Personal protective equipment	Safety glasses. Gloves. Protective clothing. High gas/vapor concentration: gas mask with filter type B.
Hand protection	Wear protective gloves.
Eye protection	Chemical goggles or face shield.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Other information	Do not eat, drink or smoke during use.

9. Physical and Chemical Properties

Physical State	Liquid
Appearance	No color
Odor	pungent
Odor Threshold	No information available
pH	No information available
Melting Point/Range	> 0 °C
Boiling Point/Range	N/A
Flash Point	N/A
Evaporation Rate	N/A
Flammability (solid,gas)	N/A
Flammability or explosive limits	
Upper	N/A
Lower	N/A
Vapor Pressure	N/A
Vapor Density	> 1.0
Relative Density	> 1.000
Solubility	Soluble in water
Partition coefficient; n-octanol/water	N/A
Autoignition Temperature	N/A
Decomposition Temperature	N/A
Viscosity	N/A

10 Stability and Reactivity

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. May ignite or explode on contact with combustible materials.

Materials to Avoid

Acids, anhydrides, aniline, bases, isocyanates, metals, oxidizing materials, phenols, reducing agents

Decomposition Products

Thermal decomposition or combustion products: oxides of carbon, oxides of nitrogen

Possibility of Hazardous Reactions

Will not polymerize

11. Toxicology Information

Acute Toxicity

Oral LD50 Category 4. ATE = 300 - 2000 mg/kg.
Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Vapor LC50 Category 4. ATE = 10 - 20 mg/l.

Component information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formaldehyde	500 mg/kg (Rat)	270 mg/kg (Rabbit)	0.578 mg/L (Rat) 4 h

Toxicologically Synergistic Products: N/A

Chronic effects from short and long-term exposure :

Irritation: Causes burns by all exposure routes

Sensitization: May cause sensitization by skin contact

Carcinogenicity: Possibly carcinogenic to human

Mutagenic Effects: Mutagenic effects have occurred in humans.

Reproductive Effects: Experiments have shown reproductive toxicity effects on laboratory.

Developmental Effects: Developmental effects have occurred in experimental animals.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

STOT - single exposure: Respiratory system

STOT - repeated exposure: Kidney Liver spleen Blood

Aspiration hazard: N/A

Symptoms / effects,both acute and delayed:

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger. Operforation: 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.

Endocrine Disruptor Information N/A

Other Adverse Effects:

Tumorigenic effects have been reported in experimental animals.

12. Ecological Information

Ecotoxicity N/A
BOD5 and COD N/A

Products of Biodegradation

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation

The products of degradation are more toxic.

13. Disposal Considerations

Disposal methods:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component Waste Numbers:

Formaldehyde - 50-00-0

14. Transport Information

Department of Transportation (DOT)

In accordance with DOT

Transport document description UN3265 Corrosive liquid, acidic, organic, n.o.s., 8, III

UN-No.(DOT)	UN3265
Proper Shipping Name (DOT)	Corrosive liquid, acidic, organic, n.o.s.
Transport hazard class(es) (DOT)	8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT)	III - Minor Danger
Hazard labels (DOT)	8 - Corrosive

DOT Packaging Non Bulk (49 CFR 173.xxx)	203
DOT Packaging Bulk (49 CFR 173.xxx)	241
DOT Symbols	G - Identifies PSN requiring a technical name
DOT Symbols	G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2);
DOT Packaging Exceptions (49 CFR 173.xxx)	154
DOT Vessel Stowage Location	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	40 - Stow "clear of living quarters"
Other information	No supplementary information available.

15. Regulatory Information

US Federal regulations

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
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All components of this product are listed, or excluded from listing, on the United States Environmental

Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Formaldehyde, 37% w/w (50-00-0)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	0.1 %

16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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