

Revision Date 04-Apr-2022

Version 1

1. IDENTIFICATION

Product Name	10% Alcoholic Formalin
Product Code	FX1027, CX1027, FXG027, FX1026, FX1028, FX1030, FX1031, FX1032
Recommended Use	For laboratory, scientific, R&D or manufacturing use.
Company	Cancer Diagnostics, Inc. 116 Page Point Circle Durham, NC 27703 1-877-846-5393 www.cancerdiagnostics.com
Emergency Telephone	Call CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

Acute toxicity - Inhalation (Gases)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1A

Label elements

Signal word

Danger

Hazard statements

Harmful if inhaled. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer.



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. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation persists or eye and/or skin remains bonded: Get medical advice/attention. IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. In Case of Fire: Use CO₂, dry chemical, or foam for extinction.

Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.

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.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Do NOT induce vomiting unless instructed to do so by medical personnel. If conscious, rinse mouth and give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Store tightly closed at 15-30C.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Water	7732-18-5	<90
Ethyl alcohol	64-17-5	<9
Formaldehyde	50-00-0	3.5-4.0
Sodium Phosphate, dibasic	7558-79-4	<1
Methyl alcohol	67-56-1	>0.5
Isopropyl alcohol	67-63-0	<0.5
Sodium Phosphate, monobasic	7558-80-7	<1

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.

Skin contact Wash skin with soap and water.

Inhalation Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms Causes skin, eye and respiratory tract irritation. If swallowed, causes GI disturbances. May cause allergic skin reaction.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

CO₂, dry chemical, dry sand, alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical

May cause sensitization by inhalation and skin contact. The product causes irritation of eyes, skin and mucous membranes.

Hazardous combustion products

Carbon oxides. Formaldehyde.

Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

NFPA **Health hazards 2** **Flammability 1** **Instability 0** **Physical and Chemical Properties -**

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes and skin. Ensure adequate ventilation, especially in confined areas. Use personal protection recommended in Section 8.

Environmental precautions Prevent product from entering drains. Should not be released into the environment. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Absorb spill with inert material, scoop up and containerize for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling Use personal protective equipment as required
Handle in accordance with good industrial hygiene and safety practice.

Storage Conditions Store at 15C to 30C.

Incompatible materials Oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Formaldehyde 50-00-0	STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048 STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm Skin	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) Skin	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³

		(vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	STEL: 500 ppm STEL: 1225 mg/m ³
--	--	---	---

Appropriate engineering controls

Engineering Controls Emergency showers, eyewash stations, ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection Respiratory protection. Do not breathe gas/fumes/vapor/spray. Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection. Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear, colorless
Odor	Odor of formaldehyde
Odor threshold	No Data Available
pH	7.10-7.30
Melting point / freezing point	No Data Available
Boiling point / boiling range	No Data Available
Flash point	85
Evaporation rate	No Data Available
Flammability (solid, gas)	No Data Available
Flammability Limit in Air	
Upper flammability limit:	No Data Available
Lower flammability limit:	No Data Available
Vapor pressure	No Data Available
Vapor density	No Data Available
Relative density	No Data Available
Water solubility	Miscible with water
Solubility in other solvents	No Data Available
Partition coefficient	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Kinematic viscosity	No Data Available

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials Oxidizers.

Hazardous Decomposition Products Carbon monoxide. Formaldehyde. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Harmful by inhalation.
Eye contact	Risk of serious damage to eyes.
Skin contact	May cause an allergic skin reaction.
Ingestion	Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts. Aspiration may cause pulmonary edema and pneumonitis.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Formaldehyde 50-00-0	= 100 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h
Sodium Phosphate, dibasic 7558-79-4	= 17 g/kg (Rat)	-	-
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit) = 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Sodium Phosphate, monobasic 7558-80-7	= 8290 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	-

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

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Risk of serious damage to eyes.
Sensitization	May cause sensitization by inhalation and skin contact. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	No Data Available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethyl alcohol 64-17-5	-	100: 96 h Pimephales promelas mg/L LC50 static 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50 9268 - 14221: 48 h Daphnia magna mg/L LC50
Formaldehyde 50-00-0	-	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 41: 96 h Brachydanio rerio mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 100 - 136: 96 h Oncorhynchus mykiss mg/L LC50 static	2: 48 h Daphnia magna mg/L LC50 11.3 - 18: 48 h Daphnia magna mg/L EC50 Static
Methyl alcohol 67-56-1	-	19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 13500 - 17600: 96 h Lepomis	-

		macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	
Isopropyl alcohol 67-63-0	1000: 96 h Desmodemus subspicatus mg/L EC50 1000: 72 h Desmodemus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50 11130: 96 h Pimephales promelas mg/L LC50 static	13299: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No Data Available.

Bioaccumulation

No Data Available.

Chemical Name	Partition coefficient
Ethyl alcohol 64-17-5	-0.32
Formaldehyde 50-00-0	0.35
Methyl alcohol 67-56-1	-0.77
Isopropyl alcohol 67-63-0	0.05

Other adverse effects

No Data Available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122
Methyl alcohol 67-56-1	-	Included in waste stream: F039	-	U154

Chemical Name	California Hazardous Waste Status
Ethyl alcohol 64-17-5	Toxic Ignitable
Formaldehyde 50-00-0	Toxic Ignitable
Methyl alcohol 67-56-1	Toxic Ignitable
Isopropyl alcohol 67-63-0	Toxic Ignitable

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Formaldehyde - 50-00-0	0.1
Methyl alcohol - 67-56-1	1.0
Isopropyl alcohol - 67-63-0	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0	100 lb	-	-	X
Sodium Phosphate, dibasic 7558-79-4	5000 lb	-	-	X

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)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ
Sodium Phosphate, dibasic 7558-79-4	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl alcohol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Ethyl alcohol - 64-17-5	Carcinogen Developmental
Formaldehyde - 50-00-0	Carcinogen
Methyl alcohol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethyl alcohol 64-17-5	X	X	X

Formaldehyde 50-00-0	X	X	X
Sodium Phosphate, dibasic 7558-79-4	X	X	X
Methyl alcohol 67-56-1	X	X	X
Isopropyl alcohol 67-63-0	X	X	X

16. OTHER INFORMATION**Prepared By**

CDI Quality & Regulatory Affairs (compliance@cancerdiagnostics.com)

Revision Date

04-Apr-2022

Disclaimer

No representation is made as to the comprehensiveness or accuracy of this document. Individuals using this information, or the product to which it refers, must exercise their independent judgment in determining all appropriateness for a particular purpose. Accordingly, the manufacturer or distributor of this chemical will not be responsible for damages of any kind or nature resulting from the use of this information or the corresponding product. No representations or warranties of any kind or nature, including but not limited to: express warranties, implied warranties or merchantability, or warranties of fitness for a particular purpose, are made hereunder with respect to the information set forth herein or to the product to which the information refers.

End of Safety Data Sheet