



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Revision Date 26-Oct-2015

Revision Number 2

1. Identification

Product Name Fisher Bio-Fresh Preserved Specimens - Grassfrogs and Bullfrogs

Cat No. : S1604, S1713S, S1322S, S1707, S1700, S1704, S170710, S170750, S1635S50, S1619S100, S1631S, S1631S10, S1601, S1611S, S1712S, S07048, S07052, S1672S10, S1708, S1623S, S1643S, S170510, S1643S50, S1611S50, S1338S, S1702, S170550, S1362S, S07049, S1643S100, S1635S, S1672S, S1611S10, S1701, S1613S, S1672S50, S07046, S07050, S1619S10, S1643S10, S1354S, S160150, S1619S, S1619S50, S1635S10, S1579S, S1583S, S1617S, S1615S, S1705, S1631S50, S160110, S07051

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887
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2. Hazard(s) identification

Classification

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

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Carcinogenicity	Category 1A

Label Elements

Signal Word
Danger

Hazard Statements
Harmful if inhaled

Harmful in contact with skin
 Harmful if swallowed
 Causes skin irritation
 Causes eye irritation
 Suspected of causing 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
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area

Response

IF exposed or concerned: Get medical attention/advice

Inhalation

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

Skin

IF ON SKIN: Wash with plenty of soap and water
 Call a POISON CENTER or doctor/physician if you feel unwell
 Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

Component	CAS-No	Weight %
1,2-Propylene glycol	57-55-6	<10
Ethylene glycol monophenyl ether	122-99-6	<3
Formaldehyde	50-00-0	0.1-0.6
Acetone	67-64-1	<0.07
Methyl alcohol	67-56-1	<0.04
2,6-Di-tert-butyl-p-cresol	128-37-0	<0.04
Glutaraldehyde	111-30-8	<0.02
Polyoxyethylene 20 sorbitan monooleate	9005-65-6	<0.0002
Water	7732-18-5	<100

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
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 Notes to Physician	No information available. Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray or fog. alcohol foam.
Unsuitable Extinguishing Media	No information available
Flash Point Method -	No information available No information available
Autoignition Temperature Explosion Limits	No information available
Upper Lower	No data available No data available
Sensitivity to Mechanical Impact Sensitivity to Static Discharge	No information available No information available

Specific Hazards Arising from the Chemical

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

Hazardous Combustion Products

Carbon monoxide, Carbon dioxide (CO₂).
No information available

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	Flammability	Instability	Physical hazards
3	1	0	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing.
Environmental Precautions	See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Keep container tightly closed in a dry and well-ventilated place.

7. Handling and storage

Handling	Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin
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and eyes. Do not taste or swallow.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Formaldehyde	Ceiling: 0.3 ppm	(Vacated) TWA: 3 ppm (Vacated) STEL: 10 ppm (Vacated) Ceiling: 5 ppm TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm TWA: 0.016 ppm Ceiling: 0.1 ppm
Acetone	TWA: 250 ppm STEL: 500 ppm	(Vacated) TWA: 750 ppm (Vacated) TWA: 1800 mg/m ³ (Vacated) STEL: 2400 mg/m ³ (Vacated) STEL: 1000 ppm TWA: 1000 ppm TWA: 2400 mg/m ³	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³
2,6-Di-tert-butyl-p-cresol	TWA: 2 mg/m ³	(Vacated) TWA: 10 mg/m ³	TWA: 10 mg/m ³
Glutaraldehyde	Ceiling: 0.05 ppm	(Vacated) Ceiling: 0.2 ppm (Vacated) Ceiling: 0.8 mg/m ³	Ceiling: 0.2 ppm Ceiling: 0.8 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
1,2-Propylene glycol			TWA: 10 mg/m ³ TWA: 50 ppm TWA: 155 mg/m ³
Ethylene glycol monophenyl ether			TWA: 25 ppm TWA: 141 mg/m ³ Skin
Formaldehyde	Ceiling: 2 ppm Ceiling: 3 mg/m ³	Ceiling: 2 ppm Ceiling: 3 mg/m ³	STEL: 1 ppm CEV: 1.5 ppm
Acetone	TWA: 500 ppm TWA: 1190 mg/m ³ STEL: 1000 ppm STEL: 2380 mg/m ³	TWA: 1000 ppm TWA: 2400 mg/m ³ STEL: 1260 ppm STEL: 3000 mg/m ³	TWA: 500 ppm STEL: 750 ppm
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 250 ppm STEL: 328 mg/m ³ Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 310 mg/m ³	TWA: 200 ppm STEL: 250 ppm Skin
2,6-Di-tert-butyl-p-cresol	STEL: 10 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³	TWA: 2 mg/m ³
Glutaraldehyde	Ceiling: 0.1 ppm Ceiling: 0.41 mg/m ³	Ceiling: 0.2 ppm Ceiling: 0.7 mg/m ³	CEV: 0.05 ppm

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

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.
Ensure adequate ventilation, especially in confined areas.

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.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
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.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid containing liquid
Appearance	Clear, colorless solution
Odor	mild pungent
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	>1
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable.
Conditions to Avoid	Incompatible products.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	No information available
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Oral LD50	Category 4. ATE = 300 - 2000 mg/kg.
Dermal LD50	Category 4. ATE = 1000 - 2000 mg/kg.
Vapor LC50	Category 4. ATE = 10 - 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1,2-Propylene glycol	LD50 = 20 g/kg (Rat)	LD50 = 20800 mg/kg (Rabbit)	Not listed
Ethylene glycol monophenyl ether	LD50 = 1260 mg/kg (Rat)	LD50 = 5 mL/kg (Rabbit)	Not listed
Formaldehyde	500 mg/kg (Rat)	LD50 = 270 mg/kg (Rabbit)	0.578 mg/L (Rat) 4 h
Acetone	5800 mg/kg (Rat)	> 15800 mg/kg (rabbit) > 7400 mg/kg (rat)	76 mg/l, 4 h, (rat)
Methyl alcohol	Calc. ATE 60 mg/kg (Human evidence) LD50 = 6200 mg/kg (Rat)	Calc. ATE 300 mg/kg (Human evidence) LD50 = 15800 mg/kg (Rabbit)	Calc. ATE 3.0 mg/l (vapours) or 0.5 mg/l (dust/mists) (Human evidence) LC50 = 64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h
2,6-Di-tert-butyl-p-cresol	>2000 mg/kg (Rat)	>2000 mg/kg (Rat)	Not listed
Glutaraldehyde	66 mg/kg (Rat) 134 mg/kg (Rat)	>2500 mg/kg (Rat)	0.480 mg/L (Rat) 4 h
Polyoxyethylene 20 sorbitan monooleate	LD50 = 34500 µL/kg (Rat)	Not listed	Not listed
Water	-	Not listed	Not listed

Toxicologically Synergistic Products No information available

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

Irritation Irritating to eyes and skin

Sensitization No information available

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

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
1,2-Propylene glycol	57-55-6	Not listed	Not listed	Not listed	Not listed	Not listed
Ethylene glycol monophenyl ether	122-99-6	Not listed	Not listed	Not listed	Not listed	Not listed
Formaldehyde	50-00-0	Group 1	Known	A2	X	A2
Acetone	67-64-1	Not listed	Not listed	Not listed	Not listed	Not listed
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
2,6-Di-tert-butyl-p-cresol	128-37-0	Not listed	Not listed	Not listed	Not listed	Not listed
Glutaraldehyde	111-30-8	Not listed	Not listed	Not listed	Not listed	Not listed
Polyoxyethylene 20 sorbitan monooleate	9005-65-6	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1,2-Propylene glycol	EC50: = 19000 mg/L, 96h (Pseudokirchneriella subcapitata)	LC50: = 710 mg/L, 96h (Pimephales promelas) LC50: = 51400 mg/L, 96h static (Pimephales promelas) LC50: 41 - 47 mL/L, 96h static (Oncorhynchus mykiss) LC50: = 51600 mg/L, 96h static (Oncorhynchus mykiss)	= 710 mg/L EC50 Photobacterium phosphoreum 30 min	EC50: > 10000 mg/L, 24h (Daphnia magna) EC50: > 1000 mg/L, 48h Static (Daphnia magna)
Ethylene glycol monophenyl ether	EC50: > 500 mg/L, 72h (Desmodesmus subspicatus)	LC50: 220 - 460 mg/L, 96h static (Leuciscus idus) LC50: = 366 mg/L, 96h static (Pimephales promelas) LC50: 337 - 352 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 32.4 mg/L 5 min EC50 = 880 mg/L 17 h	EC50: > 500 mg/L, 48h (Daphnia magna)
Formaldehyde	Not listed	Leuciscus idus: LC50 = 15 mg/L 96h	Not listed	EC50 = 20 mg/L 96h EC50 = 2 mg/L 48h
Acetone	NOEC = 430 mg/l (algae; 96 h)	Oncorhynchus mykiss: LC50 = 5540 mg/l 96h Alburnus alburnus: LC50 = 11000 mg/l 96h Leuciscus idus: LC50 = 11300 mg/L/48h Salmo gairdneri: LC50 = 6100 mg/L/24h	EC50 = 14500 mg/L/15 min	EC50 = 8800 mg/L/48h EC50 = 12700 mg/L/48h EC50 = 12600 mg/L/48h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h
2,6-Di-tert-butyl-p-cresol	EC50 = 0.758 mg/L 96h EC50 = 6 mg/L 72 h	LC50 = 0.199 mg/L 96h	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min EC50 = 8.98 mg/L 30 min	EC50 >0.31 mg/L 48h
Glutaraldehyde	EC50: = 0.84 mg/L, 96h (Desmodesmus subspicatus) EC50: = 0.61 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 5.4 mg/L, 96h static (Pimephales promelas) LC50: 7.8 - 13 mg/L, 96h static (Oncorhynchus mykiss) LC50: 2.6 - 4.8 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 7.8 - 22 mg/L, 96h static (Lepomis macrochirus)	EC50 = 13.3 mg/L 17 h EC50 = 76.0 mg/L 5 min	EC50: 0.56 - 1.0 mg/L, 48h Static (Daphnia magna) EC50: = 14 mg/L, 48h (Daphnia magna)
Polyoxyethylene 20 sorbitan monooleate	Not listed	LC50: 471 mg/L/96h (Rainbow trout)	Not listed	Not listed

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility No information available.

Component	log Pow
1,2-Propylene glycol	-0.9
Ethylene glycol monophenyl ether	1.13
Formaldehyde	-0.35

Acetone	-0.24
Methyl alcohol	-0.74
2,6-Di-tert-butyl-p-cresol	4.17
Glutaraldehyde	0.22

13. Disposal considerations

Waste 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	RCRA - U Series Wastes	RCRA - P Series Wastes
Formaldehyde - 50-00-0	U122	-
Acetone - 67-64-1	U002	-
Methyl alcohol - 67-56-1	U154	-

14. Transport information

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

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
1,2-Propylene glycol	X	X	-	200-338-0	-		X	X	X	X	X
Ethylene glycol monophenyl ether	X	X	-	204-589-7	-		X	X	X	X	X
Formaldehyde	X	X	-	200-001-8	-		X	X	X	X	X
Acetone	X	X	-	200-662-2	-		X	X	X	X	X
Methyl alcohol	X	X	-	200-659-6	-		X	X	X	X	X
2,6-Di-tert-butyl-p-cresol	X	X	-	204-881-4	-		X	X	X	X	X
Glutaraldehyde	X	X	-	203-856-5	-		X	X	X	X	X
Polyoxyethylene 20 sorbitan monooleate	X	X	-	-	-	>1<6.5 mol ethoxylated units	X	X	X	X	X
Water	X	X	-	231-791-2	-		X	-	X	X	X

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.
- 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 %
Ethylene glycol monophenyl ether	122-99-6	<3	1.0
Formaldehyde	50-00-0	0.1-0.6	0.1
Methyl alcohol	67-56-1	<0.04	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Formaldehyde	X	100 lb	-	-

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depleters	Class 2 Ozone Depleters
Ethylene glycol monophenyl ether	X		-
Formaldehyde	X		-
Methyl alcohol	X		-

OSHA Occupational Safety and Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Formaldehyde	2 ppm STEL 0.5 ppm Action Level 0.75 ppm TWA	TQ: 1000 lb

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Formaldehyde	100 lb	100 lb
Acetone	5000 lb	-
Methyl alcohol	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 µg/day	Carcinogen
Methyl alcohol	67-56-1	Developmental	-	Developmental

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1,2-Propylene glycol	-	X	X	-	X
Ethylene glycol monophenyl ether	-	X	X	X	-
Formaldehyde	X	X	X	X	X
Acetone	X	X	X	-	X
Methyl alcohol	X	X	X	X	X
2,6-Di-tert-butyl-p-cresol	X	X	X	-	X
Glutaraldehyde	X	X	X	-	X
Water	-	-	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Component	DHS Chemical Facility Anti-Terrorism Standard
Formaldehyde	11250 lb STQ (solution)
Acetone	2000 lb STQ

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D1B Toxic materials
D2A Very toxic materials
D2B Toxic materials



16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
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Revision Date 26-Oct-2015
Print Date 26-Oct-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing 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 on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS