

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product code 9012
Product name Para-Pak® Zn-PVA Fixative
Contains Zinc sulfate, Isopropyl alcohol, Methyl alcohol, Acetic acid

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

Recommended Use Fixative

1.3 Details of the supplier of the safety data sheet

Manufacturer
Meridian Bioscience, Inc.
3471 River Hills Drive
Cincinnati, Ohio 45244
(800) 343-3858

Authorized Representatives:
Meridian Bioscience Europe
Via del' Industria 7
20020 Villa Cortese Milano, Italy

Bioline (Aust) Pty Ltd
Suite 111, National Innovation Centre Building
Australian Technology Park, Eveleigh, NSW 2015
+61 2 9209 4180

For further information, please contact:

E-mail Address www.meridianbioscience.com

1.4 Emergency telephone number

Emergency telephone Emergency telephone CHEMTREC (International) 1-703-527-3887 / For US
1-800-424-9300

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****REGULATION (EC) No 1272/2008**

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 5
Acute toxicity - Inhalation (Gases)	Category 4
Serious eye damage/eye irritation	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2
Flammable liquids	Category 2

2.2 Label elements

**Signal word**

Danger

Hazard statements

H302 - Harmful if swallowed

H411 - Toxic to aquatic life with long lasting effects

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

H350 - May cause cancer

H225 - Highly flammable liquid and vapor

Contains Zinc sulfate, Isopropyl alcohol, Methyl alcohol, Acetic acid

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously 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

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P201 - Obtain special instructions before use

P281 - Use personal protective equipment as required

P308 + P313 - IF exposed or concerned: Get medical advice/ attention

2.3 Other information**SECTION 3: Composition/information on ingredients****3.1 Substances****3.2 Mixtures**

Chemical Name	EC-No	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Ethyl alcohol	Present	64-17-5	25	Flam. Liq. 2 (H225)	no data available
Zinc sulfate	Present	7733-02-0	7.9	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1	no data available

				(H410)	
Acetic acid	Present	64-19-7	4.8	Skin Corr. 1A (H314) Flam. Liq. 3 (H226)	no data available
Glycerin	Present	56-81-5	1.9	No data available	no data available
Methyl alcohol	Present	67-56-1	1.4	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)	no data available
Isopropyl alcohol	Present	67-63-0	1.4	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)	no data available

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Immediate medical attention is required.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek immediate medical attention/advice.
Ingestion	Call a physician or poison control center immediately. Immediate medical attention is required. Never give anything by mouth to an unconscious person.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which shall not be used for safety reasons

No information available.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

See Section 12 for additional Ecological Information.

6.2 Environmental precautions

Should not be released into the environment. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Do not breathe vapors or spray mist. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat and sources of ignition.

7.3 Specific end uses

Other Guidelines

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
Ethyl alcohol 64-17-5		STEL: 3000 ppm STEL: 5760 mg/m ³ TWA: 1000 ppm TWA: 1920 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	STEL: 1000 ppm STEL: 1910 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³ Ceiling / Peak: 800 ppm Ceiling / Peak: 1520 mg/m ³ Skin
Zinc sulfate 7733-02-0					TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³
Acetic acid 64-19-7	TWA 10 ppm deleted with effect from August 21, 2018 TWA 25 mg/m ³ deleted with effect from August 21, 2018	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL: 10 ppm STEL: 25 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ Ceiling / Peak: 20 ppm Ceiling / Peak: 50 mg/m ³
Glycerin		STEL: 30 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 200 mg/m ³

56-81-5		TWA: 10 mg/m ³			Ceiling / Peak: 400 mg/m ³
Methyl alcohol 67-56-1	TWA: 200 ppm TWA: 260 mg/m ³ Skin	STEL: 250 ppm STEL: 333 mg/m ³ TWA: 200 ppm TWA: 266 mg/m ³ Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1300 mg/m ³	S* TWA: 200 ppm TWA: 266 mg/m ³	TWA: 100 ppm TWA: 130 mg/m ³ Ceiling / Peak: 200 ppm Ceiling / Peak: 260 mg/m ³ Skin TWA: 200 ppm TWA: 270 mg/m ³
Isopropyl alcohol 67-63-0		STEL: 500 ppm STEL: 1250 mg/m ³ TWA: 400 ppm TWA: 999 mg/m ³	STEL: 400 ppm STEL: 980 mg/m ³	STEL: 400 ppm STEL: 1000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ Ceiling / Peak: 400 ppm Ceiling / Peak: 1000 mg/m ³
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Ethyl alcohol 64-17-5 (25)		TWA: 1000 ppm	Skin STEL: 1900 mg/m ³ TWA: 260 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
Acetic acid 64-19-7 (4.8)		STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m ³	STEL: 50 mg/m ³ TWA: 25 mg/m ³	TWA: 5 ppm TWA: 13 mg/m ³ STEL: 10 ppm STEL: 25 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³
Glycerin 56-81-5 (1.9)		TWA: 10 mg/m ³		TWA: 20 mg/m ³	
Methyl alcohol 67-56-1 (1.4)	TWA: 200 ppm TWA: 260 mg/m ³ Skin	STEL: 250 ppm TWA: 200 ppm TWA: 260 mg/m ³	Skin TWA: 133 mg/m ³	TWA: 200 ppm TWA: 270 mg/m ³ STEL: 250 ppm STEL: 330 mg/m ³ Skin	TWA: 200 ppm TWA: 260 mg/m ³ Skin
Isopropyl alcohol 67-63-0 (1.4)		STEL: 400 ppm TWA: 200 ppm		TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 620 mg/m ³	TWA: 200 ppm TWA: 490 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Ethyl alcohol 64-17-5	STEL 2000 ppm STEL 3800 mg/m ³ TWA: 1000 ppm TWA: 1900 mg/m ³	STEL: 1000 ppm STEL: 1920 mg/m ³ TWA: 500 ppm TWA: 960 mg/m ³	TWA: 1900 mg/m ³	STEL: 625 ppm STEL: 1187.5 mg/m ³	STEL: 1000 ppm
Acetic acid 64-19-7	STEL 20 ppm STEL 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL: 20 ppm STEL: 50 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³	STEL: 50 mg/m ³ TWA: 25 mg/m ³	STEL: 15 ppm STEL: 37.5 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 20 ppm STEL: 50 mg/m ³
Glycerin 56-81-5		STEL: 100 mg/m ³ TWA: 50 mg/m ³	TWA: 10 mg/m ³		
Methyl alcohol 67-56-1	Skin STEL 800 ppm STEL 1040 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	Skin STEL: 800 ppm STEL: 1040 mg/m ³ TWA: 200 ppm TWA: 260 mg/m ³	STEL: 300 mg/m ³ TWA: 100 mg/m ³	STEL: 125 ppm STEL: 162.5 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 600 ppm STEL: 780 mg/m ³ Skin
Isopropyl alcohol 67-63-0	STEL 800 ppm STEL 2000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	STEL: 400 ppm STEL: 1000 mg/m ³ TWA: 200 ppm TWA: 500 mg/m ³	STEL: 1200 mg/m ³ TWA: 900 mg/m ³	STEL: 125 ppm STEL: 306.25 mg/m ³	TWA: 200 ppm STEL: 400 ppm Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2 Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye Protection	Tightly fitting safety goggles.
Hand Protection	Protective gloves.
Skin and body protection	Wear impervious rubber clothing if needed to prevent contact with liquid material.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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

Environmental Exposure Controls Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid	Odor	No information available
Appearance	No information available	Odor threshold	No information available
Color	colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No information available
Melting point / freezing point		No information available
Boiling point/boiling range	85 °C / 185 °F	Not applicable
Flash Point	16 °C / 61 °F	Not applicable
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		No information available
Upper flammability limit:		
Lower flammability limit:		
Vapor pressure		No information available
Vapor density		No information available
Specific Gravity		No information available
Water solubility		Soluble in water
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		
Explosive properties	No information available	
Oxidizing Properties	No information available	

9.2 Other information

Softening point	No information available
Molecular weight	No information available
VOC Content(%)	No information available
Liquid Density	No information available
Bulk density	No information available

SECTION 10: Stability and reactivity

10.1 Reactivity**10.2 Chemical stability**

Stable under normal conditions.

10.3 Possibility of hazardous reactions**10.4 Conditions to Avoid**

Heat, flames and sparks.

10.5 Incompatible Materials

Strong bases. Oxidizing agents.

10.6 Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation There is no data available for this product.

Eye contact There is no data available for this product.

Skin contact There is no data available for this product.

Ingestion There is no data available for this product.

Acute toxicity 53% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,932.00 mg/kg
ATEmix (dermal)	4,831.00 mg/kg
Inhalation	
ATEmix (inhalation-gas)	3,344.00 mg/l
ATEmix (inhalation-dust/mist)	16.51 mg/l

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl alcohol	7060 mg/kg (Rat)		124.7 mg/L (Rat) 4 h
Zinc sulfate	1710 mg/kg (Rat)		
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h
Glycerin	12600 mg/kg (Rat)	10 g/kg (Rabbit)	570 mg/m ³ (Rat) 1 h
Methyl alcohol	6200 mg/kg (Rat)	15800 mg/kg (Rabbit) 15840 mg/kg (Rabbit)	22500 ppm (Rat) 8 h 64000 ppm (Rat) 4 h
Isopropyl alcohol	1870 mg/kg (Rat)	4059 mg/kg (Rabbit)	72600 mg/m ³ (Rat) 4 h

Skin corrosion/irritation No information available.

Eye damage/irritation No information available.

Sensitization No information available.

Germ Cell Mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

Specific target organ systemic toxicity (single exposure) No information available.

Specific target organ systemic toxicity (repeated exposure) No information available.

Aspiration hazard No information available.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity effects Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ethyl alcohol		13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
Zinc sulfate	0.056: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 64.8: 72 h Chlorella vulgaris mg/L EC50 2.4: 96 h Chlorella vulgaris mg/L EC50	0.218 - 0.42: 96 h Pimephales promelas mg/L LC50 flow-through 0.63: 96 h Poecilia reticulata mg/L LC50 0.23 - 0.48: 96 h Pimephales promelas mg/L LC50 0.162: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.15: 96 h Cyprinus carpio mg/L LC50 semi-static 0.03 - 0.05: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 3 - 4.6: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.34 - 0.93: 96 h Oncorhynchus mykiss mg/L LC50 static 0.48 - 1.72: 96 h Poecilia reticulata mg/L LC50 static 16.85 - 27.18: 96 h Cyprinus carpio mg/L LC50 static 0.06: 96 h Pimephales promelas mg/L LC50 static 3.55 - 6.32: 96 h Lepomis macrochirus mg/L LC50 static 0.168 - 0.25: 96 h Pimephales promelas mg/L LC50 semi-static 49.23 - 64.16: 96 h Poecilia reticulata mg/L LC50 semi-static	0.75: 48 h Daphnia magna mg/L EC50 0.538 - 0.908: 48 h Daphnia magna mg/L EC50 Static
Acetic acid		75: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Pimephales promelas mg/L LC50 static	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
Glycerin		51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	500: 24 h Daphnia magna mg/L EC50
Methyl alcohol		100: 96 h Pimephales promelas mg/L LC50 static 28200: 96 h Pimephales promelas mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	
Isopropyl alcohol	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus 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

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

Chemical Name	Partition coefficient
Ethyl alcohol	-0.32
Acetic acid	-0.31
Glycerin	-1.76
Methyl alcohol	-0.77
Isopropyl alcohol	0.05

12.4 Mobility in soil

Mobility

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations. Should not be released into the environment.
Contaminated packaging	Dispose of in accordance with local regulations. Do not re-use empty containers.

SECTION 14: Transport information

IATA	Flammable Liquid, Corrosive, n.o.s.
14.1. UN/ID No	2924
14.2. Technical Name	Ethanol, Acetic Acid
14.3. Transport hazard class(es)	3
Subsidiary hazard class	8
14.4. Packing Group	II
Description	Para-Pak® Zn-PVA
14.5. Special Provisions	None
14.6.	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Name	French RG number
Ethyl alcohol	RG 84
Methyl alcohol	RG 84
Isopropyl alcohol	RG 84

International Inventories

TSCA	Complies
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EINECS/ELINCS	-
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2 Chemical Safety Report

No information available

SECTION 16: Other information

H302 - Harmful if swallowed

H411 - Toxic to aquatic life with long lasting effects

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

H350 - May cause cancer

Issuing Date 08-May-2020

Revision Date 08-May-2020

Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Meridian Bioscience, Inc. shall not be held liable for any damages resulting from handling or from contact with the above product.