

# Safety Data Sheet

**\*\*\* Section 1 - Product and Company Identification \*\*\***

**Material Name:** ZEUS Tissue Fixative

**Product Use:** Transporting and processing fresh skin, kidney tissue, muscle and benign or malignant lymphoid tissue when performing immunohistochemical examinations, and is for In Vitro diagnostic use only

**Manufacturer Information**

Zeus Scientific, Inc.  
200 Evans Way, Branchburg NJ 08876, USA  
Toll Free (U.S): 1-800-286-2111  
International: +1-908-526-3744  
Fax: +1-908-526-2058

Website: [www.zeusscientific.com](http://www.zeusscientific.com)

**\*\*\* Section 2 - Hazards Identification \*\*\*****GHS Classification:**

Not classified in accordance to EC No. 1272/2008.

**GHS LABEL ELEMENTS****Symbol(s)**

None

**Signal Word**

None

**Hazard Statements**

None

**Precautionary Statements**

None

**\*\*\* Section 3 - Composition / Information on Ingredients \*\*\***

CAS #	Component
7783-20-2	Ammonium sulfate
7732-18-5	Water
6100-05-6	Tripotassium citrate monohydrate
7647-14-5	Sodium chloride
7558-79-4	Sodium phosphate dibasic
7487-88-9	Magnesium sulfate
128-53-0	Maleic acid N-ethylimide
7778-77-0	Dihydrogen potassium phosphate

**\*\*\* Section 4 - First Aid Measures \*\*\*****First Aid: Eyes**

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.

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## First Aid: Skin

For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.

## First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

## First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration.

## \* \* \* Section 5 - Fire Fighting Measures \* \* \*

### General Fire Hazards

See Section 9 for Flammability Properties.

None

### Hazardous Combustion Products

Not Determined

### Extinguishing Media

Use appropriate extinguishing media for surrounding fire.

### Unsuitable Extinguishing Media

None

### Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

## \* \* \* Section 6 - Accidental Release Measures \* \* \*

### Recovery and Neutralization

None

### Materials and Methods for Clean-Up

Attempt to reclaim the free product, if this is possible.

### Emergency Measures

Isolate area. Keep unnecessary personnel away.

### Personal Precautions and Protective Equipment

None necessary.

### Environmental Precautions

None

### Prevention of Secondary Hazards

None

## \* \* \* Section 7 - Handling and Storage \* \* \*

### Handling Procedures

Wash thoroughly after handling.

### Storage Procedures

No special storage needed.

### Incompatibilities

Not Determined.

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### \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

#### Component Exposure Limits

The EU, ACGIH, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, and United Kingdom have not developed exposure limits for any of the substances in this preparation.

#### Engineering Measures

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

#### Personal Protective Equipment: Respiratory

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

#### Personal Protective Equipment: Hands

Use impervious gloves.

#### Personal Protective Equipment: Eyes

Wear safety glasses with side shields.

#### Personal Protective Equipment: Skin and Body

Lab coat should be worn to minimize skin contact.

### \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Appearance:</b> Colorless	<b>Odor:</b> None
<b>Physical State:</b> Liquid	<b>pH:</b> ND
<b>Vapor Pressure:</b> ND	<b>Vapor Density:</b> ND
<b>Boiling Point:</b> ND	<b>Melting Point:</b> NA
<b>Solubility (H2O):</b> ND	<b>Specific Gravity:</b> ND
<b>Evaporation Rate:</b> ND	<b>VOC:</b> ND
<b>Octanol/H2O Coeff.:</b> ND	<b>Flash Point:</b> NA
<b>Flash Point Method:</b> NA	<b>Upper Flammability Limit (UFL):</b> NA
<b>Lower Flammability Limit (LFL):</b> NA	<b>Burning Rate:</b> NA
<b>Auto Ignition:</b> NA	

### \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

#### Chemical Stability

This is a stable material.

#### Hazardous Reaction Potential

Will not occur.

#### Conditions to Avoid

None

#### Incompatible Products

Not Determined.

#### Hazardous Decomposition Products

Not Determined.

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* * * <b>Section 11 - Toxicological Information</b> * * *
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## Acute Toxicity

### Component Analysis - LD50/LC50

**Ammonium sulfate (7783-20-2)**

Oral LD50 Rat 2000 mg/kg

**Water (7732-18-5)**

Oral LD50 Rat >90 mL/kg

**Sodium chloride (7647-14-5)**

Inhalation LC50 Rat >42 g/m<sup>3</sup> 1 h; Oral LD50 Rat 3 g/kg; Dermal LD50 Rabbit >10 g/kg

**Sodium phosphate dibasic (7558-79-4)**

Oral LD50 Rat 17 g/kg

**Maleic acid N-ethylimide (128-53-0)**

Oral LD50 Rat 25 mg/kg

**Dihydrogen potassium phosphate (7778-77-0)**

Dermal LD50 Rabbit >4640 mg/kg; Oral LD50 Mouse 1700 mg/kg

## Potential Health Effects: Skin Corrosion Property/Stimulativeness

This product is not reported to have any skin irritation effects.

## Potential Health Effects: Eye Critical Damage/ Stimulativeness

This product is not reported to have any eye irritation effects.

## Potential Health Effects: Ingestion

This product is not reported to have any ingestion hazard effects.

## Potential Health Effects: Inhalation

This product is not reported to have any inhalation hazard effects.

## Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any sensitization effects.

## Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

## Carcinogenicity

### A: General Product Information

This product is not reported to have any carcinogenic effects.

### B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

## Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

## Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ toxicity single exposure effects.

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## Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

## Aspiration Respiratory Organs Hazard

Not an aspiration hazard.

### \* \* \* Section 12 - Ecological Information \* \* \*

## Ecotoxicity

### A: General Product Information

This product is not reported to have any ecotoxicity effects.

### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

#### Ammonium sulfate (7783-20-2)

##### Test & Species

		Conditions
96 Hr LC50 Leuciscus idus	460 - 1000 mg/L [static]	
96 Hr LC50 Brachydanio rerio	250 mg/L	
96 Hr LC50 Brachydanio rerio	480 mg/L [flow-through]	
96 Hr LC50 Brachydanio rerio	420 mg/L [semi-static]	
96 Hr LC50 Cyprinus carpio	18 mg/L	
96 Hr LC50 Pimephales promelas	>100 mg/L	
96 Hr LC50 Oncorhynchus mykiss	32.2 - 41.9 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	5.2 - 8.2 mg/L [static]	
96 Hr LC50 Poecilia reticulata	123 - 128 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	126 mg/L	
24 Hr EC50 Daphnia magna	423 mg/L	
48 Hr LC50 Daphnia magna	14 mg/L	

#### Sodium chloride (7647-14-5)

##### Test & Species

		Conditions
96 Hr LC50 Lepomis macrochirus	5560 - 6080 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	12946 mg/L [static]	
96 Hr LC50 Pimephales promelas	6020 - 7070 mg/L [static]	
96 Hr LC50 Pimephales promelas	7050 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	6420 - 6700 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4747 - 7824 mg/L [flow-through]	
48 Hr EC50 Daphnia magna	1000 mg/L	
48 Hr EC50 Daphnia magna	340.7 - 469.2 mg/L [Static]	

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## Magnesium sulfate (7487-88-9)

### Test & Species

24 Hr LC50 Lepomis macrochirus	19000 mg/L [static]	<b>Conditions</b>
96 Hr LC50 Pimephales promelas	2610 - 3080 mg/L [static]	
72 Hr EC50 Desmodesmus subspicatus	2700 mg/L	
24 Hr EC50 Daphnia magna	1700 mg/L	
48 Hr EC50 Daphnia magna	266.4 - 417.3 mg/L [Static]	

### Conditions

## Persistence/Degradability

No information available for the product.

## Bioaccumulation

No information available for the product.

## Mobility in Soil

No information available for the product.

## \* \* \* Section 13 - Disposal Considerations \* \* \*

## Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

## Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

## \* \* \* Section 14 - Transportation Information \* \* \*

## IATA Information

**Shipping Name:** Not Regulated

## ICAO Information

**Shipping Name:** Not Regulated

## IMDG Information

**Shipping Name:** Not Regulated

## \* \* \* Section 15 - Regulatory Information \* \* \*

## Regulatory Information

### EU MARKING AND LABELLING:

#### Symbol(s):

None

#### Risk Phrases:

None

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## Substance Analysis - Inventory

Component/CAS	EC #	EEC	CAN	TSCA
Ammonium sulfate 7783-20-2	231-984-1	EINECS	DSL	Yes
Water 7732-18-5	231-791-2	EINECS	DSL	Yes
Tripotassium citrate monohydrate 6100-05-6	-	No	No	No
Sodium chloride 7647-14-5	231-598-3	EINECS	DSL	Yes
Sodium phosphate dibasic 7558-79-4	231-448-7	EINECS	DSL	Yes
Maleic acid N-ethylimide 128-53-0	204-892-4	EINECS	DSL	Yes
Magnesium sulfate 7487-88-9	231-298-2	EINECS	DSL	Yes
Dihydrogen potassium phosphate 7778-77-0	231-913-4	EINECS	DSL	Yes

## \*\*\* Section 16 - Other Information \*\*\*

### Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

### Literature References

Available on request.

End of Sheet