HURST SCIENTIFIC

Safety Data Sheet
Zinc Formalin 10% (Unbuffered)

SECTION 1: Identification

GHS Product identifier

Product name	Zinc Formalin 10% (Unbuffered)
Product number	ZF-2.5L, 5L, 10L
Brand	Hurstchem

Recommended use of the chemical and restrictions on use

Laboratory Reagent

Supplier's details

Name	Hurst Scientific
Address	2/36 Hensbrook Loop 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a **Hazardous** substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as a **NON-Dangerous goods** according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, oral, Cat. 4
- Acute toxicity, inhalation, Cat. 4

- Skin corrosion/irritation, Cat. 1A
- Serious eye damage/eye irritation, Cat. 1
- Skin sensitizer, Cat. 1
- Germ cell mutagenicity, Cat. 2
- Carcinogenicity, Cat. 1
- Specific target organ toxicity following single exposure, Cat. 3
- Hazardous to the aquatic environment, long-term (chronic), Cat. 2

GHS label elements, including precautionary statements

Pictograms

1. Exclamation mark; 2. Corrosion; 3. Health hazard; 4. Environment

Signal word	**Danger**

Hazard statement(s)

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H341	Suspected of causing genetic defects [route]
H350	May cause cancer [route]
H371	May cause damage to organs [organs, route]
H360	May damage fertility or the unborn child [effect, route]
H410	Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash … thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P330	Rinse mouth.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Formaldehyde

Concentration	3 - 4 %
CAS no.	50-00-0

2. Water/Aqua/Eau

Concentration	Balance
CAS no.	7732-18-5

4. Zinc sulfate Heptahydrate

Concentration	1 - 2 %
CAS no.	7446-20-0

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	Evacuate to fresh air immediately. Seek medical attention. If unconscious place in recovery position, provide artificial respiration if breathing ceases.
In case of skin contact	Remove contaminated clothing and wash affected area with soap and water thoroughly. If irritation develops, seek medical attention.
In case of eye contact	Flush eyes with copious amounts of water for at least 15 minutes. If irritation develops or persists, seek medical attention.
If swallowed	DO NOT induce vomiting. If a small amount has been swallowed, dilute the stomach by consuming copious amounts of water. For large volumes seek immediate medical attention.

Personal protective equipment for first-aid responders

Eye wash station, safety shower and First Aid kit.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Water spray, fog, carbon dioxide (CO2), alcohol-resistant foam, or dry chemical.

Specific hazards arising from the chemical.

Toxic gases may evolve.

Special protective actions for fire-fighters

Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing. Ensure adequate ventilation. If possible, contain the spill. Evacuate all unnecessary personnel.

Environmental precautions
Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

Methods and materials for containment and cleaning up.
Absorb with vermiculite or similar and place into a suitably labelled container. Dispose of waste according to local authority guidelines. Wash the affected area with a large volume of water. Do not contaminate drains or waterways.

SECTION 7: Handling and storage

Precautions for safe handling
Use only in an adequately ventilated area. Avoid breathing in mists or vapours. Wear appropriate protective clothing to avoid any exposure and practice good personal hygiene.

Conditions for safe storage, including any incompatibilities.
Store in a cool, dry, well-ventilated area away from direct sunlight.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 50-00-0
Formaldehyde
AU/SWA (Australia): 2 ppm; 2.5 mg/m3 STEL inhalation; 1 ppm; 1.2 mg/m3 TWA inhalation

Appropriate engineering controls
Ensure an adequate ventilation or exhaust system is in place.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Safety glasses or goggles with side shields.

Skin protection
Gloves and laboratory coat.

Respiratory protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirators when necessary.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Colour	Clear
Odor	Pungent
Odor threshold	0.1 ppm formaldehyde
Melting point/freezing point	-8°C

Boiling point or initial boiling point and boiling range	98°C
Flammability	Non-flammable
Lower and upper explosion limit/flammability limit	Not available
pH	5.6-5.8
Solubility	Water soluble
Vapor pressure	Not available
Density and/or relative density	Not available
Relative vapor density	0.98 – 1.03 (water = 1)

SECTION 10: Stability and reactivity

Reactivity
Non-reactive under recommended conditions for use and storage.

Chemical stability
Stable under recommended conditions for use and storage.

Possibility of hazardous reactions
Polymerisation will not occur.

Conditions to avoid.
Heat and incompatibles.

Incompatible materials
Strong oxidisers, alkalis, and acids.

Hazardous decomposition products
Toxic gases may evolve.

SECTION 11: Toxicological information

Information on toxicological effects

HEALTH EFFECTS:
Eye Contact May cause irritation resulting in redness, pain and lacrimation.
Skin Contact May cause irritation resulting in itching and redness.
Inhalation May cause irritation of the respiratory tract.
Ingestion May cause irritation to the gastrointestinal tract, resulting in nausea, vomiting and diarrhoea.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye damage.

Respiratory or skin sensitization
May cause dermatitis and allergic skin reactions.

Germ cell mutagenicity
Suspected of causing genetic defects.

Carcinogenicity

May cause cancer.

Reproductive toxicity
No classification.

Specific target organ toxicity (STOT) - single exposure.
Mixture may cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure.
Mixture may cause respiratory irritation.

Aspiration hazard
No data available

Acute Toxicity
Formaldehyde:
LD50 rat oral 100 mg/kg
LD50 rat dermal 270 mg/kg
LC50 rat inhalation 0.48 mg/l/4 hours
Zinc Sulfate:
LD50 mouse oral 245 mg/kg

SECTION 12: Ecological information

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulate potential
No data available

Mobility in soil
Not available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with local authority guidelines.

Packaging disposal
Dispose of in accordance with local authority guidelines.

SECTION 14: Transport information

UN Number	None
UN Proper Shipping Name	None
Transport hazard class(es)	None
Packing group	None

Environmental hazards	None
Special precautions for user	None
Transport in bulk according to IMO instruments	None

SECTION 15: Regulatory information

Chemical Safety Assessment

- Poison Schedule: Not scheduled.

SECTION 16: Other information

Further information/disclaimer

This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information

References

1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Can print: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).