HURST SCIENTIFIC

Safety Data Sheet
Lymph Node Fixative

SECTION 1: Identification

GHS Product identifier

Product name	Lymph Node Fixative
Product number	LYMFIX-5L, 10L
Brand	Hurstchem

Recommended use of the chemical and restrictions on use

Laboratory Reagent

Supplier's details

Name	Hurst Scientific
Address	2 Transit Place 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.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 8

- Flammable liquids, Cat. 2
- Acute toxicity, oral, Cat. 4
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2
- Carcinogenicity, Cat. 2
- Specific target organ toxicity, repeated exposure, Cat. 1

GHS label elements, including precautionary statements

Pictograms

1. Flame; 2. Exclamation mark; 3. Health hazard

Signal word	**Danger**

Hazard statement(s)

H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H351	Suspected of causing cancer [route]
H372	Causes damage to organs [organs] through prolonged or repeated exposure [route]

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P370+P378	In case of fire: Use … to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to …
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P317	IF SWALLOWED: Get medical help.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P321	Specific treatment (see … on this label).
P332+P317	If skin irritation occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P317	If eye irritation persists: Get medical help.
P203	Obtain, read and follow all safety instructions before use.
P318	IF exposed or concerned, get medical advice.
P405	Store locked up.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P319	Get medical help if you feel unwell.

Other hazards which do not result in classification

Classified as a Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Ethanol

Concentration	61 %
CAS no.	64-17-5

2. Formaldehyde

Concentration	< 10 %
CAS no.	50-00-0

3. Water/Aqua/Eau

Concentration	Remainder
CAS no.	7732-18-5

4. Acetic acid

Concentration	< 5 %
CAS no.	64-19-7

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.

Ethanol: Carbon oxides

Special protective actions for fire-fighters
Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment.

Further information
Hazchen Code 2YE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
If spill or leakage occurs eliminate all sources of ignition and take measures to prevent static discharge. Clear area of all persons not involved with the clean-up and ensure all others wear suitable protective equipment and breathing apparatus. Contain the spill or absorb using a suitable inert material such as vermiculite or sand etc... Prevent run off into drains and if contamination of waterways has occurred notify the local emergency services. Use water spray to disperse vapour. Ventilate the area well and ensure the atmosphere is clear of contaminant prior to allowing personnel to return.

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

Methods and materials for containment and cleaning up
Wash the affected area with a large volume of water. De-gas any non-returnable containers prior to disposal and adhere to local government
guidelines for the disposal of any material or packaging.

SECTION 7: Handling and storage

Precautions for safe handling
Use in well ventilated areas away from all sources of ignition. Avoid breathing in mists or vapours. Wear appropriate protective clothing to avoid any exposure and practice good personal hygiene. Ensure containers are earthed when agitating or transferring product to avoid static discharge.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area away from heat, sources of ignition and out of direct sunlight. Keep containers tightly closed when not in use and protected against physical damage.

SECTION 8: Exposure controls/personal protection

Control parameters

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

CAS: 64-17-5
Ethanol
AU/SWA (Australia): 1000 ppm; 1880 mg/m3 TWA inhalation

CAS: 64-19-7
Acetic acid
AU/SWA (Australia): 15 ppm; 37 mg/m3 STEL inhalation; 10 ppm; 25 mg/m3 TWA inhalation

Appropriate engineering controls
Ensure adequate ventilation to maintain airborne concentrations below national exposure standards.

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

Eye/face protection

clothing, safety glasses or chemical resistant splash-proof goggles to prevent eye contact and nitrile/neoprene gloves. If working within a confined area always use a suitable respirator.

Skin protection
Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Color	Clear
Odor	Distinct Alcohol odour
Melting point/freezing point	Ethanol -117°C
Boiling point or initial boiling point and boiling range	Ethanol: 78 °C
Lower and upper explosion limit/flammability limit	Ethanol: 3.5% - 19%
Flash point	Ethanol: 13°C (closed cup)
pH	Not available
Solubility	Soluble
Vapor pressure	Not available
Density and/or relative density	Approx. 0.8 (water = 1)
Relative vapor density	Not available

SECTION 10: Stability and reactivity

Chemical stability
Stable under recommended conditions for use and storage.

Possibility of hazardous reactions
None known.

Conditions to avoid
Heat, direct sunlight, moisture, sparks, flame and build-up of static electricity.

Incompatible materials
Strong oxidisers, alkalis, and acids.

Ethanol: Alkali metals, Oxidizing agents, Peroxides

Acetic acid: Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

Hazardous decomposition products
Toxic gases may evolve.

Acetic acid: Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

HEALTH EFFECTS:
Eye Contact: Irritating to eyes. Exposure may result in lacrimation, irritation, pain and redness.
Skin Contact: Prolonged/repeated contact may result in irritation, drying and defatting of the skin, rash and dermatitis.Inhalation May cause irritation of the respiratory tract.
Ingestion: Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain, diarrhoea, headache, dizziness and drowsiness with large doses. Liver damage may occur with high level of chronic ingestion.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Can cause irritation.

Respiratory or skin sensitization
Not data available.

Germ cell mutagenicity
Not data available.

Carcinogenicity
Formaldehyde is a Group 1 Carcinogen according to the IARC monographs. Carcinogenic to humans.

Reproductive toxicity
No data available.

Specific target organ toxicity (STOT) - single exposure
No data available.

Specific target organ toxicity (STOT) - repeated exposure
No data available.

Aspiration hazard
No data available

Additional information
TOXICITY DATA:
Ethanol (100%) : Inhalation LC50 Rat: 2000 ppm/10h
Oral LD50 Rat: 7060 mg/kg
Ingestion LD50 Mouse: 3450 mg/kg
Glacial Acetic Acid: LD50 (Oral, Rat): 3310mg/kg
LC50 (Inhalation, Rat): 11.4 mg/l/4h
LD50 (Dermal, Rabbit): 1060 mg/kg
Formaldehyde: LD50/oral/ rat: 800mg/kg
LC50/inhalation/rat: 578mg/m3/4hr

SECTION 12: Ecological information

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil

No data 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	1992
Hazchem emergency action code (EAC)	2YE
UN Proper Shipping Name	Flammable liquids, toxic, n.o.s (Ethanol and Formaldehyde)
Transport hazard class(es)	3
Packing group	II

Special precautions for user
No data available

SECTION 15: Regulatory information

Chemical Safety Assessment
• TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day week.
• STEL (Short Term Exposure Limit): The average airborne concentration over a 15-minute period which should not be exceeded at any time during a normal eight-hour workday.

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); Canprint: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).