



SAFETY DATA SHEET

Revision Date: 10-Jan-2026
Revision Number 3

LSS-501 – HiDef N-2 100X

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name HiDef N-2 100X

Other means of identification

Catalog Number LSS-501

Document Number DX20260110-03

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory Reagent
PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Details of the supplier of the safety data sheet

Manufacturer/Supplier

DEFINED BIOSCIENCE, INC.
7770 REGENTS RD #113238
SAN DIEGO, CA 921221937 USA

Emergency telephone number

Emergency Telephone 929-333-4633

2. HAZARDS IDENTIFICATION

Classification

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

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

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Hazard statements

- ☐ H225: Highly flammable liquid and vapor.
- ☐ H302: Harmful if swallowed.
- ☐ H360: May damage fertility or unborn child.
- ☐ H319: Causes serious eye irritation.
- ☐ H411: Toxic to aquatic life with long-lasting effects.

Appearance Clear

Physical state Liquid

Odor No information available

Other Information

- ☐ P201: Obtain special instructions before use.
- ☐ P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
- ☐ P273: Avoid release to the environment.
- ☐ P280: Wear protective gloves and eye protection.
- ☐ P301 + P310: If swallowed: Immediately call a poison center or doctor.

Unknown acute toxicity

- 0 % of the mixture consists of ingredient(s) of unknown toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Ingredient	CAS Number	% w/v*	Classification
Progesterone	57-83-0	<0.001%	Reproductive Toxicity (Category 1B).
Sodium Selenite (NaSe)	10102-18-8	<0.001%	Acute Toxicity (Category 3, Oral).
Insulin	11070-73-8	<0.1%	Not classified as hazardous.
Transferrin	11096-37-0	<5%	Not classified as hazardous.
Putrescine	110-60-1	<1%	Skin and Eye Irritant (Category 2), Acute Toxicity (Category 4, Oral).
Ethanol (EtOH)	64-17-5	<0.5%	Flammable Liquid (Category 2), Eye Irritant (Category 2).

Mixture

Not a hazardous mixture according to the Globally Harmonized System (GHS), beyond information given above (see **Substance**).

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

- ☐ **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. If irritation persists, seek medical attention.
- ☐ **Skin Contact:** Wash thoroughly with soap and water. If irritation occurs, consult a doctor.

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- ☐ **Inhalation:** Move to fresh air. Seek medical attention if symptoms persist.
- ☐ **Ingestion:** Rinse mouth with water. Do not induce vomiting. Call a poison control center or doctor immediately.

Most important symptoms and effect, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from chemical	Vapors may form explosive mixtures with air. Flashpoint of ethanol is around 14°C (57°F).
Explosion data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use appropriate PPE (gloves, goggles). Eliminate all sources of ignition. Ensure proper ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Absorb with inert material and place in a container for disposal according to local regulations.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid inhalation, contact with skin, clothing, and eyes. Use in well-ventilated areas. Keep away from sources of ignition.

Conditions for safe storage, including any incompatibilities

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Use safety glasses with side shields.

Skin and body protection Use chemical-resistant gloves.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Pale red
Odor	No information available
Odor threshold	No information available

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<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	
<u>Other Information</u>		
Softening point	No information available	
Molecular weight	No information available	
Molecular formula	No information available	
VOC Content (%)	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity	No information available
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None under normal processing
Conditions to avoid	None known based on information supplied.
Incompatible Materials	Strong oxidizers, acids, and bases.
Hazardous decomposition products	None under normal conditions.

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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available
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Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
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0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT – single exposure	No information available.
Persistence and degradability	No information available.
Bioaccumulation	No information available.

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12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxic to aquatic life with long-lasting effects.
Persistence and degradability	No information available.
Bioaccumulation	No information available.
Other adverse effects	No information available.

13. DISPOSAL INFORMATION

Waste treatment methods

Waste from residues/unused Products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. TRANSPORT INFORMATION

<u>DOT</u>	COMBUSTIBLE LIQUID, NOT REGULATED FOR TRANSPORT IN THIS QUANTITY. According to 49 CFR §173.150(f)(1), this material should be reclassified as NA1993, Combustible Liquid, NOS if it is shipped in bulk.
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

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15. REGULATORY INFORMATION

International Inventories

TSCA	Sodium selenite, ethanol, and progesterone are listed.
DSL/NDL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

This product contains substances regulated under **Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)**:

- **Sodium Selenite (CAS 10102-18-8)**: Listed under SARA 313 for toxic chemical release reporting.

SARA 311/312 Hazard Categories

Acute health hazard	Yes (sodium selenite and putrescine)
Chronic Health Hazard	Yes (progesterone and sodium selenite)
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substance regulated as a pollutant under the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

- **Sodium Selenite (CAS 10102-18-8)**: Listed as a hazardous substance.

CERCLA

This material, as supplied, contains **Sodium Selenite (CAS 10102-18-8)**, which is regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302), bulk-dependent:

- **Reportable Quantity (RQ)**: 1 pound (0.454 kg).

US State Regulations



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California Proposition 65

This product contains the following chemical(s) known to the State of California to cause cancer or reproductive harm:

- **Progesterone (CAS 57-83-0):** Listed as a carcinogen.

U.S. State Right-to-Know Regulations

US State Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Water (CAS 7732-18-5)	-	-	X
Sodium Selenite (CAS 10102-18-8)	X	X	X
Ethanol (CAS 64-17-5)	X	X	X
Progesterone (CAS 57-83-0)	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By, Quality Control. Defined Bioscience, Inc.

Revision Date 10-Jan-2026

Revision Note No information available.

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. Defined Bioscience, Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

End of Safety Data Sheet