

# SAFETY DATA SHEET

Version 1.0  
Revision Date 09/29/2026  
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## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : **ONYX Solution (30 mL)**  
Product Number : ONYX-30ML  
Brand : 4AminoLabs  
CAS-No. (actives) : 154992-24-2; 38304-91-5; 98319-26-7; 164656-23-9; 302-79-4 (see section 3)  
Reference batch : See container label

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

Identified uses : Laboratory research and analytical reference use.  
Uses advised against : Not for human or veterinary use. Not a drug, dietary supplement, food, or cosmetic. Supplied under the TSCA R&D Exemption (40 CFR Section 720.36); it is the recipient's responsibility to comply with the requirements of the R&D exemption.

### 1.3 Details of the supplier of the safety data sheet

Company : 4AminoLabs  
1001 S. Main Street, STE 600  
Kalispell, MT 59901  
UNITED STATES  
Telephone : +1 (256) 472-1983  
E-mail : sales@4aminolabs.com  
Website : www.4aminolabs.com

### 1.4 Emergency telephone number

Emergency Phone # : Poison Control Center (US): 1-800-222-1222 (24 hours/day, 7 days/week)

## SECTION 2. HAZARDS IDENTIFICATION

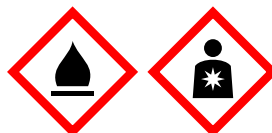
### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids : Category 3  
Reproductive toxicity : Category 1B

Classification is based on the actual concentrations of the ingredients in the finished product (GHS mixture rules). The flammable-liquid classification is applied conservatively on the basis of the ethanol content; the flash point of the mixture has not been measured.

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
H360FD May damage fertility. May damage the unborn child.

**Precautionary statements**

**Prevention:**

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.

P203 Obtain, read and follow all safety instructions before use.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P318 IF exposed or concerned, get medical advice.

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

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Finasteride, dutasteride and tretinoin can be absorbed through the skin: persons who are pregnant, breast-feeding, or may become pregnant must not handle this product. Vapours of the ethanol component may form flammable mixtures with air on heating.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture (solution)

**Components**

| Chemical name                                                                                                                                                                                 | CAS-No.     | Concentration      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| <b>RU58841</b><br>Synonyms: 4-[3-(4-hydroxybutyl)-4,4-dimethyl-2,5-dioxoimidazolidin-1-yl]-2-(trifluoromethyl)benzonitrile<br>Formula: $C_{17}H_{18}F_3N_3O_3$ Molecular weight: 369.34 g/mol | 154992-24-2 | 5 % (50 mg/mL)     |
| <b>Minoxidil</b><br>Formula: $C_9H_{15}N_5O$ Molecular weight: 209.25 g/mol                                                                                                                   | 38304-91-5  | 5 % (50 mg/mL)     |
| <b>Finasteride</b><br>Formula: $C_{23}H_{36}N_2O_2$ Molecular weight: 372.55 g/mol                                                                                                            | 98319-26-7  | 0.5 % (5 mg/mL)    |
| <b>Dutasteride</b><br>Formula: $C_{27}H_{30}F_6N_2O_2$ Molecular weight: 528.53 g/mol                                                                                                         | 164656-23-9 | 0.3 % (3 mg/mL)    |
| <b>Tretinoin</b><br>Synonyms: all-trans-retinoic acid<br>Formula: $C_{20}H_{28}O_2$ Molecular weight: 300.44 g/mol                                                                            | 302-79-4    | 0.1 % (1 mg/mL)    |
| <b>Hyaluronic acid (sodium hyaluronate)</b><br>Formula: $(C_{14}H_{21}NO_{11})_n$ Molecular weight: polymer                                                                                   | 9004-61-9   | 0.01 % (0.1 mg/mL) |
| Propylene glycol                                                                                                                                                                              | 57-55-6     | Balance            |
| Ethanol                                                                                                                                                                                       | 64-17-5     | 10 % v/v           |

Carrier: Propylene glycol with 10 % v/v ethanol.

## SECTION 4. FIRST AID MEASURES

|                                                             |                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Show this safety data sheet to the doctor in attendance.                                                                                                                                                                                                     |
| If inhaled                                                  | : After inhalation: fresh air. Call in physician if symptoms develop.                                                                                                                                                                                          |
| In case of skin contact                                     | : Take off immediately all contaminated clothing. Rinse skin with plenty of water/ shower. Consult a physician.                                                                                                                                                |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water for at least 15 minutes. Remove contact lenses. Consult an ophthalmologist.                                                                                                                                |
| If swallowed                                                | : After swallowing: rinse mouth, make victim drink water (two glasses at most). Do not induce vomiting. Consult a physician.                                                                                                                                   |
| Most important symptoms and effects, both acute and delayed | : Minoxidil is a potent vasodilator; significant exposure may cause low blood pressure, rapid heart rate and dizziness. Finasteride, dutasteride, and RU58841 have anti-androgenic hormonal effects. Tretinoin may cause skin irritation. See also section 11. |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                                                                                                                                                                       |
| Notes to physician                                          | : Treat symptomatically. Monitor blood pressure and heart rate following significant ingestion (minoxidil).                                                                                                                                                    |

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## SECTION 5. FIREFIGHTING MEASURES

|                                               |                                                                                                                                                          |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                  | : Water spray, alcohol-resistant foam, dry powder, carbon dioxide (CO <sub>2</sub> ).                                                                    |
| Unsuitable extinguishing media                | : Do not use a solid water stream as it may scatter and spread fire.                                                                                     |
| Specific hazards during firefighting          | : Flammable liquid and vapour (ethanol component). Vapours are heavier than air and may travel to a source of ignition. Containers may burst on heating. |
| Hazardous combustion products                 | : Carbon oxides<br>Nitrogen oxides (NO <sub>x</sub> )                                                                                                    |
| Further information                           | : Cool closed containers exposed to fire with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system. |
| Special protective equipment for firefighters | : In the event of fire, wear self-contained breathing apparatus.                                                                                         |

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

|                                                                     |                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of vapours and aerosols. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.<br>Advice for emergency responders: For personal protection see section 8. |
| Environmental precautions                                           | : Do not let product enter drains. Prevent release to the environment.                                                                                                                                                                                                                                      |
| Methods and materials for containment and cleaning up               | : Take up with liquid-absorbent material (e.g. vermiculite, sand, universal binder). Place in a closed, labeled container. Clean the affected area with soap and water. Dispose of properly (see section 13).                                                                                               |

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## SECTION 7. HANDLING AND STORAGE

|                                           |                                                                                                                                                                                                                                  |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advice on safe handling                   | : For precautions see section 2. Handle only by qualified personnel in a laboratory setting. Work in a fume hood when transferring or aliquoting. Avoid contact with skin and eyes. Keep away from open flames and hot surfaces. |
| Hygiene measures                          | : Change contaminated clothing immediately. Wash hands after working with substance. Do not eat, drink, or smoke in work areas.                                                                                                  |
| Further information on storage conditions | : Tightly closed. Protect from light. Store upright in a well-ventilated place. Store locked up or in an area accessible only to qualified or authorized persons.                                                                |
| Storage class                             | : 3, Flammable liquids                                                                                                                                                                                                           |
| Recommended storage temperature           | : 68 - 77 °F / 20 - 25 °C                                                                                                                                                                                                        |

Materials to avoid : Strong oxidizing agents, strong acids, alkali metals, acid chlorides.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Component                            | CAS-No.     | Value type | Control parameter                    | Basis    |
|--------------------------------------|-------------|------------|--------------------------------------|----------|
| RU58841                              | 154992-24-2 | -          | No established limit                 | -        |
| Minoxidil                            | 38304-91-5  | -          | No established limit                 | -        |
| Finasteride                          | 98319-26-7  | -          | No established limit                 | -        |
| Dutasteride                          | 164656-23-9 | -          | No established limit                 | -        |
| Tretinoin                            | 302-79-4    | -          | No established limit                 | -        |
| Hyaluronic acid (sodium hyaluronate) | 9004-61-9   | -          | No established limit                 | -        |
| Propylene glycol                     | 57-55-6     | -          | No established limit                 | -        |
| Ethanol                              | 64-17-5     | TWA        | 1,000 ppm<br>1,900 mg/m <sup>3</sup> | OSHA Z-1 |
|                                      |             | STEL       | 1,000 ppm                            | ACGIH    |

Engineering measures : Use a fume hood when transferring, heating, or aerosolizing. Provide an eyewash station and safety shower.

### Personal protective equipment

Respiratory protection : Not required under normal use in a fume hood. If vapours or aerosols are generated, use a NIOSH-approved respirator with organic vapour cartridges and P100 prefilters.

Hand protection : Material: Nitrile rubber  
Glove thickness: minimum 0.11 mm  
Protective index: full contact and splash contact  
Remarks: Inspect gloves before use and dispose of after contamination.

Eye protection : Chemical splash goggles or safety glasses with side shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection : Laboratory coat. Impervious clothing as needed for the task.

Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid, viscous solution

Color : Colorless to pale yellow

Odor : Faint, alcoholic

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : Not determined for the mixture. Classified as a Category 3 flammable liquid (flash point 23 - 60 °C) on the basis of the 10 % v/v ethanol content. Ethanol: 13 °C (55 °F) closed cup.

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

|                                        |                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------|
| Upper/lower explosion limit            | : No data available                                                               |
| Vapor pressure                         | : No data available                                                               |
| Relative vapour density                | : No data available                                                               |
| Relative density                       | : approx. 1.0                                                                     |
| Water solubility                       | : Solvent carrier is miscible with water; actives: practically insoluble in water |
| Partition coefficient: n-octanol/water | : No data available                                                               |
| Autoignition temperature               | : No data available                                                               |
| Decomposition temperature              | : No data available                                                               |
| Viscosity                              | : No data available                                                               |
| Explosive properties                   | : Not explosive                                                                   |
| Oxidizing properties                   | : None                                                                            |
| Molecular weight                       | : See section 3 (multi-component solution)                                        |
| Nominal concentration                  | :                                                                                 |

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## SECTION 10. STABILITY AND REACTIVITY

|                                    |                                                                                                                             |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : No data available                                                                                                         |
| Chemical stability                 | : The product is chemically stable under standard ambient conditions (room temperature). The glycol carrier is hygroscopic. |
| Possibility of hazardous reactions | : Vapours may form explosive mixtures with air on heating. Ethanol may react violently with strong oxidizing agents.        |
| Conditions to avoid                | : Heat, flames, sparks, direct light, moisture.                                                                             |
| Incompatible materials             | : Strong oxidizing agents, strong acids, alkali metals, acid chlorides.                                                     |
| Hazardous decomposition products   | : In the event of fire: see section 5                                                                                       |

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## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified for this solution (calculated from ingredient concentrations). Pure finasteride and minoxidil: Acute Tox. 4 (Oral).

#### Skin corrosion/irritation

No data available for the mixture. Tretinoin and ethanol may cause skin irritation on repeated contact.

#### Serious eye damage/eye irritation

May cause eye irritation (ethanol, propylene glycol).

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### Reproductive toxicity

May damage fertility. May damage the unborn child. Finasteride (0.5 %) and tretinoin (0.1 %) are classified Repr. 1B and are at or above the 0.1 % concentration limit. Dutasteride (0.3 %) is a 5-alpha-reductase inhibitor that can cause abnormalities of the external genitalia of a male fetus. These substances can be absorbed through the skin.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available. Minoxidil: cardiovascular system (animal data).

**Solvent carrier**

Propylene glycol has low acute toxicity. Ethanol at 10 % v/v: may cause mild, transient eye irritation.

**Aspiration hazard**

No data available

**11.2 Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

Contains pharmacologically active substances; tretinoin is very toxic to aquatic life. Avoid release to the environment. This product neither contains, nor was manufactured with, a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A + B).

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

- |                        |   |                                                                                                                                                                                                                                                                                            |
|------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste from residues    | : | Waste material must be disposed of in accordance with national, state, and local regulations using a licensed waste disposal contractor. Collect as non-halogenated organic solvent waste. Leave chemicals in original containers. No mixing with other waste. Do not pour down the drain. |
| Contaminated packaging | : | Handle uncleaned containers like the product itself.                                                                                                                                                                                                                                       |

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**IATA-DGR**

UN-Number: UN1993 Class: 3 Packing group: III

Proper shipping name: Flammable liquid, n.o.s. (Ethanol)

Inner packagings of 30 mL may be shipped as Limited Quantity (Y344) where permitted.

**IMDG-Code**

UN-Number: UN1993 Class: 3 Packing group: III EMS-No: F-E, S-E  
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Ethanol)  
Marine pollutant: No

## National Regulations

### 49 CFR (DOT)

UN-Number: UN1993 Class: 3 Packing group: III  
Proper shipping name: Flammable liquid, n.o.s. (Ethanol)  
Inner packagings of 1 L or less may be shipped as Limited Quantity (49 CFR 173.150(b)). If the flash point is determined to be 38 °C (100 °F) or higher, the product may be reclassified as a combustible liquid for domestic ground transport (49 CFR 173.120(b)(2)); if 60 °C (140 °F) or higher and not bulk, it is not regulated.  
Poison Inhalation Hazard : No  
Special precautions for user : Keep away from heat and ignition sources during transport.

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## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 302 / 304 Extremely Hazardous Substances

This material does not contain any components with a section 302 EHS TPQ or section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)  
Reproductive toxicity  
SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP) as defined by the U.S. Clean Air Act Section 112 (40 CFR 61), nor any Class I or Class II ODS.

### Clean Water Act

This product does not contain any Hazardous Substances listed under Section 311, Table 116.4A, or toxic or priority pollutants under Section 307.

## US State Regulations

Massachusetts Right To Know : Ethanol (64-17-5)  
Pennsylvania Right To Know : Ethanol (64-17-5)  
New Jersey Right To Know : Ethanol (64-17-5)  
Maine / Vermont / Washington : Product does not contain any listed chemicals.  
Chemicals of High Concern  
California Prop. 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Inventories

TSCA : Product contains substance(s) not listed on the TSCA inventory. Supplied for research and development use only under 40 CFR 720.36.

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EMS - Emergency Schedule (IMDG); GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA-DGR - International Air Transport Association Dangerous Goods Regulations; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population; NIOSH - National Institute for Occupational Safety and Health; NTP - National Toxicology Program; ODS - Ozone Depleting Substance; OSHA - Occupational Safety and Health Administration; PPE - Personal Protective Equipment; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; STEL - Short Term Exposure Limit; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average.

For research use only. Not for human or veterinary use. The information is believed to be correct but is not exhaustive and shall be used solely as a guideline, based on current knowledge of the chemical substance or mixture, and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. 4AminoLabs shall not be held liable for any damage resulting from handling or from contact with the above product. The burden of safe use rests with the user.

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Version : 1.0 (initial issue)