



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.  
 847-967-6000 800-323-8144  
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

**Emergency Contact:**  
 INFOTRAC 800-535-5053 [U.S.A.]

Name: D-Luciferin Sodium Salt  
 Code: 1-360102-100, 1-360241-200, 1-360242-200, 1-360243-200, 1-360244-200, 1-360245-200, 1-360246-200, 1-360312-200, 1-360320-200

..... **SAFETY DATA SHEET** .....

**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY** .....

- 1.1 Product Identifier
  - Name D-Luciferin Sodium Salt
  - Code 1-360102-100, 1-360241-200, 1-360242-200, 1-360243-200, 1-360244-200, 1-360245-200, 1-360246-200, 1-360312-200, 1-360320-200
- 1.2 Use of Substance/Mixture
  - Use Analytical—Used in ATP assays
- 1.3 Details of Manufacturer/Supplier
  - Company Regis Technologies, Inc.  
 8210 N. Austin Avenue  
 Morton Grove, IL 60053  
 847-967-6000; 800-323-8144 (toll free)  
 Email: cservice@registech.com  
 www.registech.com
- 1.4 Emergency Telephone
  - INFOTRAC 800-535-5053 [U.S.A.]

**SECTION 2 HAZARDS IDENTIFICATION** .....

- 2.1 Classification of the Substance or Mixture
    - OSHA Hazards No known OSHA hazards.
    - Target Organs None known.
- Hazard Indication (67/548/EEC or 1999/45/EC)
- |             |        |   |
|-------------|--------|---|
| Symbol(s)   | NA     |   |
| R-Phrase(s) | NA     |   |
| S-Phrase(s) | S24/25 | Avoid contact with skin and eyes.                                       |
|             | S6     | Keep under nitrogen.  |
|             | S7/47  | Keep container tightly closed and at a temperature not exceeding -20°C. |

GHS Classification  
 Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

GHS Label Elements

Pictograms or hazard symbols	Not applicable
Signal Word	Not applicable
Hazard Statement	Not applicable
Precautionary Statements	Not applicable
[Response]	P302+P352-IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
[Storage]	P404: Store in a closed container. P411+P235+P410: Store at temperatures not exceeding -20 °C/-4°F. Keep cool. Protect from light.

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS** .....

Name	D-Luciferin Sodium Salt
Synonyms	D-(-)-Luciferin Sodium Salt; (S)-Luciferin Sodium Salt; Firefly Luciferin Sodium Salt; (S)-2-(6-Hydroxy-2-benzothiazolyl)-2-thiazoline-4-carboxylic acid; 4,5-Dihydro-2-(6-hydroxy--2Δ-benzothiazolyl)-4-thiazolecarboxylic acid; Luciferin Sodium Salt

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



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CAS No. 103404-75-7  
 EINECS No. none  
 Chem. Formula C<sub>11</sub>H<sub>7</sub>N<sub>2</sub>O<sub>3</sub>S<sub>2</sub>Na  
 Mol. Weight 303.31

Ingredients	Concentration (%/wt)
D-Luciferin Sodium Salt (103404-75-7).....	NLT 99.0 %
Manufacturing impurities .....	NMT 1.0 %

**SECTION 4 ..... FIRST AID MEASURES .....**

- 4.1 Description of first aid measures  
 General: Do not attempt to neutralize as it frequently makes matters worse.  
 Eye contact: Rinse eyes with plenty of water for at least 15 minutes; lift eyelids occasionally. If irritation persists, consult physician.  
 Skin contact: Immediately remove contaminated clothing and shoes, then wash skin with soap and plenty of water. If irritation persists, consult physician.  
 Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and keep person warm and at rest. Consult physician.  
 Ingestion: Give large amounts of water or milk (two glasses at most). Avoid vomiting. Consult physician immediately.  
 Physician note: Symptomatic and supportive care. There is no specific antidote.
- 4.2 Most important symptoms and effects, both acute and delayed.  
 Eyes-may cause mild irritation on contact. May be irritating to skin. May be irritating to mucous membranes, if mists are inhaled. May be harmful if ingested.
- 4.3 Indication of immediate medical attention and special treatment needed.  
 No information available.

**SECTION 5 ..... FIRE-FIGHTING MEASURES .....**

- 5.1 Suitable Extinguishing Media  
 Not applicable.
- 5.2 Specific hazards arising from the chemical.  
 Non flammable or combustible.  
 Explosion potential--none.  
 Avoid inhalation of material or combustion by-products.  
 Emits toxic fumes under fire conditions: May emit carbon oxides, sulfur oxides, nitrogen oxides.
- 5.3 Advice for fire-fighters  
 Wear protective clothing to prevent contact with skin and eyes.

**SECTION 6 ..... ACCIDENTAL RELEASE MEASURES.....**

- 6.1 Personal precautions, protective equipment, and emergency procedures  
 For non-emergency personnel - Avoid material contact or inhalation of mists. Evacuate unnecessary personnel from area.  
 For emergency responders – Wear protective clothing to prevent contact with skin and eyes. Avoid breathing mists. See Section 8.3.
- 6.2 Environmental precautions  
 Prevent material from entering drains.

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6.3 Methods of clean up  
 Ventilate area. Isolate spilled material. Absorb using chemically compatible spill pillows, or similar adsorbent material. Sweep up, if not absorbed in pillow, seal in appropriate hazardous waste container, and hold for proper waste disposal. Keep out of water supplies and sewers. Wash spill site after material pickup is complete.

**SECTION 7 ..... HANDLING AND STORAGE.....**

7.1 Safe Handling Precautions  
 Wear suitable protective equipment to avoid contact with skin, eyes, or inhalation of mists. May be irritating to skin or eyes. May be irritating to mucous membranes, if mists are inhaled. May be harmful if ingested. Wash after handling.

7.2 Storage Conditions  
 Store tightly closed in a cool, dry, and well ventilated place. Store away from incompatible materials (See Section 10.).

**SECTION 8 ..... EXPOSURE CONTROLS / PERSONAL PROTECTION.....**

8.1 Control parameters  
 Exposure limits: D-Luciferin Sodium Salt –  
                                   OSHA – PEL   No limits established.  
                                   ACGIH – TLV   No limits established.

Environmental    Do not empty into drains.

8.2 Appropriate engineering controls  
 Safety shower and eye wash  
 Local exhaust and mechanical ventilation required. Hood recommended. Fume scrubber.

8.3 Personal protection  
 Eye/Face            Chemical safety eyewear or goggles.  
 Hand                 Compatible chemical-resistant gloves.  
 Respiratory         If exposure to mists likely: NIOSH/MSHA approved respirator for organic vapor and mists.  
 Dermal (not hand)   Protective Clothing (e.g., lab coat)  
 Hygiene             Avoid inhalation, ingestion; contact with eyes, skin, and clothing; Avoid prolonged or repeated exposure.  
                                   Wash thoroughly after handling.

**SECTION 9 ..... PHYSICAL AND CHEMICAL PROPERTIES .....**

9.1 Information on physical and chemical data

Chemical Formula	C <sub>11</sub> H <sub>7</sub> N <sub>2</sub> O <sub>3</sub> S <sub>2</sub> Na	
Molecular Weight	303.31	
Form	solid	
Appearance	pale yellow to yellow	
Odor	none	
Odor threshold	No data available.	
pH	Neutral	
Melting/freezing point	No data available.	
Boiling point:	No data available.	
Flammability (liquid)		
Flash Point	No data available.	
Flammable limits (%v/v)	UEL (upper explosive limit)	No data available.
	LEL (lower explosive limit)	No data available.
Autoignition temperature	No data available.	

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Decomposition temperature	No data available.
OSHA Flammability Class	No data available.
Evaporation Rate (BuAc = 1.0)	No data available.
Vapor pressure (mmHg)	No data available.
Vapor density (air=1):	No data available.
Relative density (g/cm <sup>3</sup> )	1.610
Water Solubility	Miscible.
Water reactive	No data available.
Solubility (other)	No data available.
Partition coefficient: N-octanol/water	Kow (Pow) = No data available.
Viscosity	No data available.
Solubility in organic solvents	methanol, acetone, ethyl acetate, DMF

**SECTION 10** ..... **STABILITY AND REACTIVITY** .....

- 10.1 Reactivity  
No dangerous reaction known under conditions of normal use.
- 10.2 Chemical Stability  
Stable if stored dry, under nitrogen in light-tight containers, in the dark at or below -20°C.
- 10.3 Possibility of hazardous reactions  
No hazardous reactions known under conditions of normal use.
- 10.4 Conditions to avoid  
Avoid incompatibilities.  
Keep out of water supplies and sewers.
- 10.5 Incompatible materials  
Light (photosensitive), heat, air sensitive—Discolors or decomposes upon exposure to light, heat, and/or air.  
Oxidizers
- 10.6 Hazardous decomposition products  
Combustion carbon oxides, sulfur oxides, nitrogen oxides, sodium compounds

**SECTION 11** ..... **TOXICOLOGICAL INFORMATION**.....

11.1 Toxicological Information		
Acute toxicity	Oral LD50	No data available.
	Inhalation LC50	No data available.
	Dermal LD50	No data available.
	Other acute toxicity	No data available.
Skin corrosion/irritation	No data available.	
Serious eye damage/irritation	No data available.	
Respiratory irritation	No data available.	
Respiratory or skin sensitization	No data available.	
Germ cell mutagenicity	No data available.	
Carcinogenicity		
IARC	No data available.	
NTP	No data available.	
OSHA	No data available.	
Reproductive toxicity (Including teratogenicity)	No data available.	

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Specific target organ toxicity (STOT)  
 STOT-single exposure No data available.  
 STOT-repeated exposure No data available.  
 Aspiration hazard No data available.  
 RTECS Number Not available

11.2 Further Information  
 Potential health effects  
 Eye May be irritating.  
 Skin May be irritating.  
 Inhalation May be irritating to mucous membranes and respiratory tract. May be harmful.  
 Ingestion May be harmful.  
 Symptoms See above route. Pre-existing conditions that may be aggravated: not determined.  
 Miscellaneous No data available.

**SECTION 12** ..... **ECOLOGICAL INFORMATION** .....

12.1 Ecotoxicity No data available.  
 12.2 Persistence and degradability No data available.  
 12.3 Bioaccumulative potential BCF = No data available.  
 12.4 Motility in soil Log Kow = No data available.  
 12.5 Other adverse effects No data available.

**SECTION 13** ..... **DISPOSAL CONSIDERATIONS** .....

13.1 Disposal methods  
 U . S. EPA Waste Codes None  
 Waste Characterization RCRA Hazard Class (40CFR 261): none  
 (per U. S. regulations) Generator is responsible for proper waste characterization. NOTE: U. S. state hazardous waste regulations may differ considerably from U. S. Federal regulations.  
 Waste Disposal That which cannot be recovered or recycled, should be disposed of in accordance with all applicable international, national, regional, state, and local laws. Do NOT dump into any sewer, on ground, or into any body of water.

**SECTION 14** ..... **TRANSPORT INFORMATION** .....

14.1 UN number Not applicable. Not regulated—Not a dangerous goods.  
 14.2 UN proper shipping name Not applicable.  
 14.3 Transport Hazard Class Not applicable.  
 14.5 Packing group Not applicable.  
 14.6 Environmental hazards Not applicable  
 14.6 Special precautions for user See Section 8 for exposure/personal protection guidance.  
 NA Emergency Guidebook Number: Not applicable.

**SECTION 15** ..... **REGULATORY INFORMATION** .....

15.1 Safety, health and Environmental regulations specific for the product in question.  
 OSHA Health: No known hazards. Physical: No known hazards.  
 NFPA: H0 F0 R0 HMIS: H0 F0 PH0

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15.2 Chemical Inventory Lists

.....D-Luciferin Sodium Salt  
 CAS Number..... 103404-75-7  
 TSCA: ..... NL  
 EINECS:..... NL  
 Number..... NA  
 OSHA Process Safety [29 CFR 1910.119]: ..... NL  
 TQ (lbs)..... NA  
 CERCLA [Section 103 (40 CFR 302.4)]:..... NL  
 RQ (lbs) ..... NA  
 RCRA Waste Code..... NA  
 Clean Air Act  
 [Section 112r (40 CFR 68)]:..... NL  
 TQ (lbs)..... NA  
 Contains Ozone Depleters (Class I or Class II) ..... N  
 [Section 103 (40 CFR 302.4)]: ..... NL  
 SARA Title III Notification [40 CFR 302.4]:  
 Section 302/304 (EHS) Ingredient [40 CFR 355.3]..... NL  
 TPQ (lbs)..... NA  
 RQ (lbs) ..... NA  
 Section 313 Ingredient [40 CFR 372.65] ..... NL  
 SARA Hazards Acute..... N Chronic..... N Fire.....N Pressure..... N Reactivity .....N  
 State Lists: ..... NL  
 States..... NL  
 On CA 65 Significant Risk Level..... NL

**SECTION 16** ..... **OTHER INFORMATION** .....

16.1 Literature References

None.

The above information is believed to be correct to the best of our present state knowledge, but does not purport to be all-inclusive and shall be used only as a guide. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

***This is the last page of this MSDS.***

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