

## Material Safety Data Sheet

### SECTION 1: COMPANY IDENTIFICATION

Supplier's name : ReSem BV  
Supplier's address : Hoofdweg 172  
1175 LD Lijnden  
The Netherlands  
Telephone number : + 31 23 555 25 02  
Fax Number : + 31 23 555 25 06  
E-mail address : info@resem.com  
Website : www.resem.com

### SECTION 2: CHEMICAL IDENTIFICATION

Chemical Product name: D- Luciferin  
(synthetic, identical to natural product Photinus Pyralis, North American Firefly)

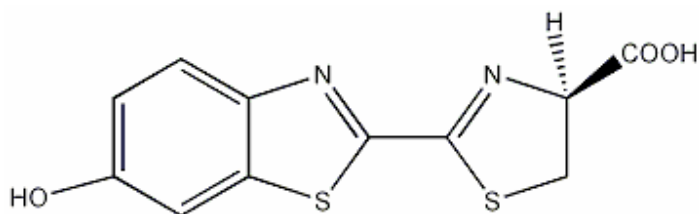
### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**EC NO 219-981-3**

CAS NO 2591-17-5

CHEMICAL ABSTRACT REGISTRATION NO 67-56-1

MOLECULAR FORMULA



d-luciferin

$C_{11}H_8N_2O_3S_2$   
Mol. Wt.: 280.32

Chemical name : 4,5-dihydro-[6-hydroxy-2-benzothiazoyl]-4-thiazolecarboxylic acid  
Chemical formula :  $C_{11}H_8N_2O_3S_2$


**SECTION 4: HAZARDS IDENTIFICATION**

Physical hazards	: none
Chemical hazards	: none
Effect(s) of (over)exposure	: none
Symptoms of (over) exposure	: none
Health hazards	: Material may be harmful by inhalation, ingestion or skin absorption. Causes eye and skin irritation. The material is irritating to mucous membranes and upper respiratory tract.

**SECTION 5: FIRST AID PROCEDURES**

Eye contact	: Rinse eyes immediately with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Seek medical advice immediately.
Skin contact	: Take off contaminated clothing and shoes immediately. Wash skin with soap and copious amounts of water. Seek medical advice.
Inhalation	: Remove from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical advice immediately.
Ingestion	: If swallowed, wash out mouth with water. Seek medical advice immediately.

**SECTION 6: FIRE AND EXPLOSION HAZARD DATA**

Flash Point	: Not available
Flammable limits	: Not available
Hazardous thermal decomposition	: When heated to decomposition material emits toxic fumes (CO, CO <sub>2</sub> , SO <sub>2</sub> and NO <sub>3</sub> )
Extinguishing Media	: Carbon dioxide, dry chemical powder, appropriate foam and water spray.
Special fire fighting procedures	: none
Protection of fire-fighters	: Fire –fighters must wear self contained breathing equipments and impervious clothing

**SECTION 7: ACCIDENTAL RELEASE MEASURES**

Personal precautions	: Avoid contact with the eyes and skin. Do not swallow. Do not breathe dust.
Environmental precautions	: Avoid contact with environment
Methods for cleaning up	: Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Evacuate the area. Sweep up, place in bag and hold for waste material. Ventilate the area and wash spill site after material pickup is completed. Avoid raising dust.



### SECTION 8: HANDLING AND STORAGE

Handling	: Use adequate ventilation. Keep containers closed and moisture free. Wear chemical –safety goggles, chemical –resistant gloves and other protective clothing.
Storage	: Protect from light and air. Store at -20° C.
Packaging materials	: Plastic containers.

### SECTION 9: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures	: Access to safety shower and eye-wash. Mechanical exhaust required.
Hygienic measures	: Do not eat, drink and/or smoke during work. Wash after handling.
Work / Hygiene practices	: Wash thoroughly after handling.

#### *Personal protection*

Respiratory system	: Use respirator and wear dust mask.
Skin and body	: Use protective clothing.
Hands	: Wear rubber gloves.
Eyes	: Use eye/ face protection.

### SECTION 10: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Microcrystalline powder
Colour	: White to slightly yellow
Odour	: None
Solubility	: Soluble in alkaline solutions and methanol.
Melting point	: 201° C.
Boiling point	: -
Density	: -
Flash point	: -
Lower explosion limits	: -
Upper explosion limits	: -

### SECTION 11: STABILITY AND REACTIVITY

Stability	: Stable under light and humidity protection. 5 years at -18° C, 30 days 27 °C, 7 days at 37° C.
Conditions to avoid	: Protect from heat, light, air and moisture.
Materials to avoid	: Strong oxidizing agents, strong acids and strong bases.
Hazardous decomposition products	: CO, CO <sub>2</sub> , NO <sub>x</sub> , SO <sub>x</sub> .
Hazardous polymerization	: Will not occur.

**SECTION 12: TOXICOLOGICAL INFORMATION**

Acute toxicity	: The chemical, physical and toxicological properties have not been thoroughly investigated.
Intravenous	: -
Subcutaneous	: -
Inhalation	: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Eye irritation	: May cause eye irritation.
Skin irritation	: May be harmful if absorbed through skin. May cause skin irritation.
Sensitization	: -
Chronic toxicity	: -
Carcinogenicity	: -
Mutagenicity	: -

**SECTION 13: ECOLOGICAL INFORMATION**

Mobility	: Data not available
Persistence and degradability	: Data not available
Bioaccumulative potential	: Data not available
Ecotoxicity	: Data not available

**SECTION 14: DISPOSAL CONSIDERATIONS**

Methods of disposal	: Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator according to local environmental regulations.
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**SECTION 15: TRANSPORT INFORMATION**

AIR/ IATA	: not regulated.
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**SECTION 16: REGULATORY INFORMATION**

Responsibility	: Responsibility of the receiver to have knowledge of national and local regulations.
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**SECTION 16: OTHER INFORMATION**

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE.  
RESEM BV SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.