

Beetle Lysis-Juice 102513

Name	Description	Amount	Symbol
Beetle Long Glow-Juice	Buffer for screening with Luciferases from Firefly	1	Xi
ATP	Adenosintriphosphat, Substrate	1	---
D-Luciferine	p. a. free acid, firefly (synth.).	1	---



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

Product Identifier:

Trade name: *Beetle Long Glow-Juice*

Article number: 102513

Application of the substance / the preparation *Laboratory chemicals*

Details of the supplier of the safety data sheet
Manufacturer/Supplier:

*PJK GmbH
Elseasser Strasse 51
66271 Kleinblittersdorf
Germany*

Phone: +49 (0)6805 91 20 22

Fax: +49 (0)6805 91 20 24

info@pjk-gmbh.com

Further information obtainable from: *Department Health, Safety and Environment*

Emergency telephone number: *Poison Centre Munich Telefon*

+49/(0)89 19240

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36: Irritating to eyes.

H315 Causes skin irritation.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification system:

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

Label elements

Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product has been classified and marked in accordance with directives on hazardous materials.

Safety phrases:

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

Wash thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical characterisation: *Mixtures*

Description: *Mixture of the substances listed below with nonhazardous additions*

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TRADE NAME: BEETLE LONG GLOW-JUICE

Dangerous components:

CAS	Substance	Conc.
60-00-4	Ethylenediamine tetraacetic acid (EDTA); Xi;R36	<0,01%
55965-84-9	ProClin 300, T, N, R23/24/25-R34-R43-R50/53	0,001%
p-tertiary-Octylphenoxy polyethyl alcohol	Acute toxicity, Oral (Category 4) Serious eye damage (Category 1) Chronic aquatic toxicity (Category 2)	<1%
CAS: 9002-93-1	H302;H318;H411	
	R22;R41;R51/53	
3483-12-3	1,4-Dithiothreitol Xn;R22 Xi; R36/37/38	< 0,01%

4. FIRST AID MEASURES

Description of first aid measures

After inhalation: Supply fresh air.

After skin contact: May cause sensitisation by skin contact.

After eye contact: Rinse opened eye for 10 minutes under running water. Then consult a doctor.

After swallowing: Rinse out mouth and drink a glass of water. Do not induce vomiting. Call for a doctor immediately and show the container or label.

5. FIREFIGHTING MEASURES

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

Special hazards arising from the substance or mixture Not known

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with the eyes. Wear protective clothing

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid binding material

7 HANDLING AND STORAGE

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Keep containers, equipment and working place clean.

Handling corresponding to laboratory safety guidelines.

Information about fire - and explosion protection: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage: + 4°C / -20°C

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions: Keep container tightly sealed.

Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

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TRADE NAME: BEETLE LONG GLOW-JUICE

*Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.*

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Nitrile, thickness >0,3 mm.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies

from manufacturer to manufacturer.

Penetration time of glove material

Value for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Body protection: *Protective work clothing*

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance:

Form: *Fluid*

Colour: *Colorless*

Odour: *Charakteristic*

Odour threshold: *Not determined.*

pH-value at 23°C: *alkaline*

Change in condition

Melting point/Melting range: *0°C*

Boiling point/Boiling range: *100°C*

Flash point: *Not applicable*

Flammability (solid, gaseous): *Not applicable*

Ignition temperature: *Not determined*

Decomposition temperature: *Not determined*

Self-igniting: *Product is not selfigniting.*

Danger of explosion: *Product does not present an explosion hazard.*

Explosion limits:

Lower: *Not determined.*

Upper: *Not determined.*

Vapour pressure at 20°C: *Not determined*

Density at 20°C: *Not determined*

Bulk density at 20°C: *Not determined*

Relative density *Not determined.*

Vapour density *Not determined*

Evaporation rate *Not determined*

Solubility in / Miscibility with

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TRADE NAME: BEETLE LONG GLOW-JUICE

water at 20°C: Not miscible or difficult to mix

Segregation coefficient (n-octanol/water): Not determined

Viscosity:

Dynamic: Not determined

Kinematic: Not determined

Other information No further relevant information available

10. Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

Incompatible materials: Strong oxidizing agents, bases (violent reactions).

Hazardous decomposition products: No dangerous decomposition products known

11. Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

60-00-4 edetic acid

Oral LD50 2580 mg/kg (rat)

55965-84-9 ProClin 300

Oral LD50 3723 mg/kg (rat)

3483-12-3 1,4-Dithiothreitol

Oral LD50 400 mg/kg (rat)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

12. Ecological information

Aquatic toxicity: Harmful to aquatic life with long lasting effects.

Persistence and degradability Not available

Behavior in environmental systems:

Bioaccumulative potential Not known

Ecotoxicological effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

13. Disposal considerations

Waste treatment methods

Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14. Transport information

DOT regulations: Not regulated

Hazard class: -

Land transport ADR/RID (cross-border): Not regulated

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TRADE NAME: BEETLE LONG GLOW-JUICE

DOT regulations: Not regulated

Hazard class: -

Land transport ADR/RID (cross-border): Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations:

Information about limitation of use:

In dealing with chemicals the national laws must be observed.

Waterhazard class: Water hazard class 2 (Assessment by list): hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

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1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: *ATP Component B*

Article number: *102513 Beetle Long Glow-Juice*

CAS Number:

987-65-5

EINECS Number:

213-579-1

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

Application of the substance / the preparation *Laboratory chemical*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

The substance is not classified according to the CLP regulation.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** *Void*

· **Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** *Void*

· **Hazard pictograms** *Void*

· **Signal word** *Void*

· **Hazard statements** *Void*

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** *Not applicable.*

· **vPvB:** *Not applicable.*

3 Composition/information on ingredients

Chemical characterization: *Substances*

CAS No. Description

987-65-5 Adenosine 5'-(tetrahydrogen triphosphate), disodium salt

Identification number(s)

EC Number: *213-579-1*

4 First aid measures

Description of first aid measures

After inhalation: *Supply fresh air.*

After skin contact: *Immediately rinse with water.*

After eye contact: *Rinse opened eye for 10 minutes under running water.*

After swallowing:

Rinse out mouth and drink a glass of water. Do not induce vomiting.

If symptoms persist consult doctor.

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TRADE NAME: ATP COMPONENT B

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder, foam or water spray.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Avoid formation of dust.
 - **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
 - **Methods and material for containment and cleaning up:** Pick up mechanically.
 - **Reference to other sections**
- See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
 - **Precautions for safe handling** Handling corresponding to laboratory safety guidelines.
 - **Information about fire - and explosion protection:** No special measures required.
 - **Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Store away from foodstuffs.
 - **Further information about storage conditions:**
- Keep container tightly sealed.
Storage temperature: -20 °C

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
 - **Control parameters**
 - **Ingredients with limit values that require monitoring at the workplace:** Not required.
 - **Additional information:** The lists valid during the making were used as basis.
 - **Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
 - **Respiratory protection:** Required when dusts are generated.
 - **Protection of hands:**
- Protective gloves
- **Material of gloves**
- Nitrile, thickness: >0.1 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
- Tightly sealed goggles
- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

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TRADE NAME: ATP COMPONENT B

Form: Solid

Colour: White

· **Odour:** Odourless

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Product is not flammable.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined.

· **Solubility in / Miscibility with water:** Soluble.

10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** Heating

· **Possibility of hazardous reactions** No information available.

· **Incompatible materials:** Strong oxidizing agents.

· **Hazardous decomposition products:** No information available.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:** Quantitative data on the toxicity of this product are not available.

· **Primary irritant effect:**

· **on the skin:** No irritating effect.

· **on the eye:** No irritating effect.

· **after inhalation:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

· **Further information:** The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

· **Toxicity**

· **Acquatic toxicity:** Quantitative data on the ecological effect of this product are not available.

Additional ecological information:

· **General notes:** Do not allow product to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

· **Uncleaned packaging:**

Recommendation: Disposal according to official regulations.

TRADE NAME: ATP COMPONENT B

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Remarks:** Not subject to transport regulations.
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -
- **Special precautions for user** Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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1 Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name: *D-Luciferin component A*

Article number: *102513 Beetle Long Glow-Juice*

CAS Number:

2591-17-5

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

Application of the substance / the preparation *Laboratory chemical*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

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2 Hazards identification

Classification of the substance or mixture

Not a dangerous substance according to GHS.

This substance is not classified as dangerous according to Directive 67/548/EEC.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards – *none*

3 Composition/Information on ingredients

Substances

Synonyms : (S)-2-(6-Hydroxy-2-benzothiazolyl)-2-thiazoline-4-carboxylic acid Firefly Luciferin 4,5-Dihydro-2-(6-hydroxy-2-benzothiazolyl)-4-thiazolecarboxylic acid

(S)-4,5-Dihydro-2-(6-hydroxybenzothiazol-2-yl)thiazole-4-carboxylic acid

CAS-No.

2591-17-5

EC-No.

219-981-3

4. First aid measures

Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

no data available

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TRADE NAME: D-LUCIFERIN COMPONENT A

5. Firefighting measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), Sulphur oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

no data available

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. Handling and storage

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C

Air and light sensitive.

Specific end uses

no data available

8. Exposure controls/personal protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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TRADE NAME: D-LUCIFERIN COMPONENT A

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Form: solid

Colour: light yellow

Odour no data available

Odour Threshold no data available

pH no data available

Melting point/freezing point

Melting point/range: 201 °C

Initial boiling point and boiling range no data available

Flash point no data available

Evaporation rate no data available

Flammability (solid, gas) no data available

Upper/lower flammability or explosive limits no data available

Vapour pressure no data available

Vapour density no data available

Relative density no data available

Water solubility no data available

Partition coefficient: noctanol/water no data available

Autoignition temperature no data available

Decomposition temperature no data available

Viscosity no data available

Explosive properties no data available

Oxidizing properties no data available

Other safety information

no data available

10. Stability and reactivity

Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

no data available

Conditions to avoid

Air Light.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

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TRADE NAME: D-LUCIFERIN COMPONENT A

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.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation *May be harmful if inhaled. May cause respiratory tract irritation.*

Ingestion *May be harmful if swallowed.*

Skin *May be harmful if absorbed through skin. May cause skin irritation.*

Eyes *May cause eye irritation.*

Signs and Symptoms of Exposure

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

Additional Information

RTECS: Not available

12. Ecological information

Toxicity *no data available*

Persistence and degradability *no data available*

Bioaccumulative potential *no data available*

Mobility in soil *no data available*

Results of PBT and vPvB assessment *no data available*

Other adverse effects *no data available*

13. Disposal considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

14. Transport information

UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packaging group

ADR/RID: - IMDG: - IATA: -

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

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TRADE NAME: D-LUCIFERIN COMPONENT A

Special precautions for user

no data available

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

Chemical Safety Assessment

no data available

16. Other information

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