

Brain Power Inc.

Safety Data Sheet according to EC 1907/2006, 1272/2008, 830/2015

OSHA Hazard Communication Standard 29 CFR 1910.1200. GHS Rev

Date of Issue: 4 November, 2016

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

1.1 Product identifier(s): **BPI Photochromic Salt**

Product codes: 51101, 51201

1.2 Relevant Identified Uses of the substance or mixture and uses advised against:

Use: Chemical hardening of Photochromic glass spectacle lenses.

Uses advised against: No data

1.3 Details of the supplier of the safety data sheet:

Brain Power Inc.; 4470 S.W. 74th Ave.; Miami, Florida ; USA 33155.

1.4 Emergency Telephone Number:

Telephone: 0013052644465 Fax: 0013052641467

Information department: 001 305 264 4465

Emergency contact: 001 305 264 4465 (x364)

2. Hazards identification

2.1 Classification of the substance or mixture according to Regulation EC 1272/2008 (CLP):

May intensify fire; oxidiser (H272).

2.2 GHS Label elements (EC) 1272/2008:



Pictogram(s): Oxidiser (GHS03)

Signal Word: Danger

Contains: Potassium Nitrate
Sodium Nitrate

Hazard Statement(s): May intensify fire; oxidiser (H272).

Precautionary Statement(s): Keep away from heat – no smoking (P210). Keep away from clothing / combustible material (P220). Take precautions to avoid mixing with combustibles (P 221). Wear protective gloves and eye / face protection (P 280). In case of fire use water fog, dry chemical, carbon dioxide, foam for extinction (P370+378). Dispose of contents/container in accordance with local / national / international regulations (P501).

2.3 Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. May be harmful by ingestion - forms methemoglobin which can cause cyanosis. Onset of cyanosis may be up to 4 hours after exposure.

3. Composition / information on ingredients

3.1 Substance:

Chemical name:

CAS-Reg.No:

EC-No:

EINECS-No:

Further information:

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3.2 Mixture:

Description: Mix of Sodium Nitrate, Potassium Nitrate and Silicic Acid.

Chemical name: Potassium Nitrate

Synonym: No data.

CAS-Reg.No: 7757-79-1

EC-No: 231-818-8)

EINECS-No:

Hazards: Oxidiser sol. 3 (H272).

Concentration: more than 45%

Chemical name: Sodium Nitrate

Synonym: No data.

CAS-Reg.No: 7631-99-4

EC-No: 231-554-3

EINECS-No:

Hazards: Oxidiser sol. 3 (H272).

Concentration: more 45%

Ingredients at concentrations not known to be hazardous:

Content: 1% - 9%

Further information: Other ingredients not at concentrations known to be hazardous.

4. First-aid measures

4.1 Description of first aid measures

General Advice : Consult a physician. Show this safety data sheet to the doctor.

Inhalation : Move to fresh air.

Skin contact : Flush exposed area well with water for at least 15 minutes. If irritation persists seek medical advice

Eye contact : Flush exposed area well with water for at least 15 minutes. If irritation persists seek medical advice.

Ingestion : Wash out mouth with water and seek immediate medical assistance.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2 and/or section 11).

4.3 Indications of any immediate medical attention and special treatment needed

See section 2.2 .

5. Fire-fighting measures

5.1 Extinguishing media: In case of fire use water fog, dry chemical, carbon dioxide, foam for extinction (P370+378).

Unsuitable extinguishing media: No data

5.2 Special hazards arising from the substance or mixture:

Take precautions to avoid mixing with combustibles (P221). Wear protective gloves and eye/face protection (P280). Decomposes to nitrous oxides (NO), potassium nitrite and potassium oxide.

5.3 Advice for fire-fighters: May intensify fire; oxidiser (H272). Wear self-contained breathing apparatus with protective clothing to avoid personal contact.

6. Accidental release measures

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- 6.1 Personal precautions, protective equipment and emergency procedures : Wear protective gloves and eye / face protection (P280).
Keep away from clothing / combustible materials (P220).
- 6.2 Environmental precautions : Soak up all spills with inert absorbent material. Place in closed container for proper waste disposal.
- 6.3 Methods and materials for containment and cleaning up:
Soak up all spills with inert absorbent material. Place in closed container for proper waste disposal.
- 6.4 Reference to other sections : See Section 4 and 5.2
-

7. Handling and storage

- 7.1 Precautions for Safe Handling: Keep away from heat – no smoking (P210). Keep away from clothing / combustible materials (P220). Take precautions to avoid mixing with combustibles (P221). Wear protective gloves (use chemical and heat resistant) and eye / face protection (P280). Do not use a hot plate or open flame. Avoid eye and skin contact.
- 7.2 Conditions for Safe Storage, including any incompatibilities:
Keep away from heat – no smoking (P210). Store away from clothing / combustible materials (P220). Take precautions to avoid mixing with combustibles (P221). Stable on storage under normal conditions.
- 7.3 Specific End Use: Chemical hardening of Photochromic glass spectacle lenses.
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8. Exposure controls and personal protection

- 8.1 Control parameters: Contains no substances at concentrations with exposure limit values.
- 8.2 Exposure control: Handle in accordance with good industrial hygiene and safety practices. Avoid all personal contact. Wear appropriate safety equipment. Wash hands before breaks and at the end of workday.
- Personal protective equipment :
- Respiratory protection : Where risk assessment shows air purifying respirators are appropriate, use a NIOSH or CEN approved respirator for inorganic dusts.
- Hand protection : Wear protective gloves (P280). Wear suitable impervious gloves (such as disposable latex).
- Eye protection : Wear eye protection (P280). Chemical resistant safety goggles are strongly recommended.
- Skin protection : Protective lab coat recommended. Wear suitable protective clothing and gloves.
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9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance:
- Colour: Clear to white solid
- Odour: Slight odor
- Changes in physical state
- Boiling point/Boiling range (°C) : decomposes
- Melting point/Freezing temperature (°C): >300°C
- Flash point (°C) : not determined
- Ignition temperature (°C) : not determined
- Autoignition : not determined
- Explosion hazard : Avoid contact with combustible material
- Explosion limits (Vol.-%) : lower: upper:
- Vapour pressure (mbar) : No Data.

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| | | | |
|------------------------------|----------------------|---|---------------------------|
| Vapor density | (g/cm ³) | : | No Data |
| Bulk density | (kg/m ³) | : | >2000 |
| Solubility in water | | : | somewhat |
| Solubility in other solvents | | : | slightly soluble in water |
| pH-value | | : | not determined |
| Viscosity | | : | not determined |

9.2 Other safety information : no data available

10. Stability and reactivity

| | | |
|---|---|---|
| 10.1 Reactivity | : | Hazardous polymerization will not occur. |
| 10.2 Chemical Stability | : | Stable on storage under normal conditions. |
| 10.3 Possibility of Hazardous Reactions | : | May intensify fire; oxidizer (H 272). |
| 10.4 Conditions to avoid | : | Keep away from heat – no smoking (P210). Take precautions to avoid mixing with combustibles (P 221). |
| 10.5 Incompatible materials | : | Keep away from clothing / combustible material (P220). Take precautions to avoid mixing with combustibles (P 221). Avoid combustible material. Protect from moisture. Avoid finely powdered metals. |
| 10.6 Hazardous decomposition products | : | Decomposes to nitrous oxides (NO), sodium oxides potassium nitrite and potassium oxide. |

11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity : May be harmful by ingestion - forms methemoglobin which can cause cyanosis. Onset of cyanosis may be up to 4 hours after exposure. May cause skin and eye irritation. May be absorbed through skin or inhaled.

Specific symptoms in animal experiments: Oral LD50 >2g/kg (rat) is typical.

Irritation effects : May cause eye and skin irritation. May be irritating to mucous membranes and upper respiratory tract. Overexposure may cause redness and irritation.

Sensitization : No Data

Subacute to chronic toxicity: No Data

Carcinogenicity, mutagenicity, teratogenicity:

NTP? Not listed

IARC Monographs? Not listed

OSHA Regulated? Not listed

11.2 Other information: Overexposure may cause redness and irritation.

12. Ecological Information

12.1 Toxicity: 96Hr LC 50 1378 mg/L *Poecillia Reticulata* (fresh water fish) for potassium nitrate component.

12.2 Persistence and Degradability: Degrades into potassium ions, sodium ions and nitrate ions.

12.3 Bioaccumulative Potential: Low.

12.4 Mobility in Soil: no data available

12.5 Results of PBT and vPvP Assessment: no data available

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12.6 Other Adverse Effects : no data available

13. Disposal considerations

13.1 Waste Treatment Methods: Dispose of contents/container in accordance with Local / national / international regulations (P501).

14. Transport Information

14.1 UN Number: 1499
14.2 UN Proper Shipping Name: Potassium Nitrate and Sodium Nitrate mixture
14.3 Transport Hazard Class(es): 5.1
14.4 Packing Group: III
14.5 Environmental Hazards: No data
14.6 Special precautions for user: None other than listed in sections 7 and 8.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: See above.
14.8 Information for each of the UN Model Regulations: See above.
IMDG/IMO: EMS-No. F-A, S-Q
ADR: See Above.

Air transport

ICAO/IATA-DGR Class: 5.1 UN/ID-No.: 1499 PG: III

Technical name of material: Potassium Nitrate and Sodium Nitrate mixture

Remarks: Potassium Nitrate and Sodium Nitrate mixture

Additional information: (US) DOT: Warning sign: Oxidizer Class: 5.1

UN/ID-No.: 1499 PG: III

Technical name of material: Potassium Nitrate and Sodium Nitrate mixture and <10% Silicic Acid.

15. Regulatory Information

15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture:
EC 1907/2006, 1272/2008, 830/2015

15.2 Chemical Safety Assessment : Danger "May intensify fire; oxidiser" (H272); GHS03

Contains: Potassium Nitrate (CAS No. 7757-79-1; EN No. 231-818-8)
Sodium Nitrate (CAS No. 7631-99-4; EN No. 231-554-3)

Hazard Statement: See section 2

Precautions: See section 2

15.3 Additional information:

TSCA listed ingredients. EC listed ingredients.

The following components are subject to reporting levels established by SARA Title III section 313:
Potassium Nitrate (CAS No. 7757-79-1); Sodium Nitrate (CAS No. 7631-99-4)

16. Other Information

16.1 NFPA Codes: H: 0; F: 0; R: 1; Special: OX

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The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. The safety data sheet only describes the products in aspect to their safety requirements. Recipients of our product must take responsibility for observing existing laws and regulations.