MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE           N0235
PRODUCT NAME           NATURAL HELIOTROPINE
SUPPLIER                Shanghai M & U International Trade Co., Ltd.
                        Rm 1717, No 598 North NuJiang Road
                        200333 Shanghai, China
                        +86-21-32515501 32515502
                        sales@mu-intel.com

FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Emergency Overview
OSHA Hazards
Irreant

GHS Classification
Acute toxicity, Oral (Category 5)
Skin irritation (Category 2)
Eye irritation (Category 2B)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word   Warning

Hazard statement(s)
H303           May be harmful if swallowed
H315 + H320    Causes skin and eye irritation
H402           Harmful to aquatic life

Precautionary statement(s)
P305 + P351 + P338     IF IN EYES: Rinse cautiously with water for several minutes.
                        Remove contact lenses, if present and easy to do. Continue rinsing

HMIS Classification

N0235- NATURAL HELIOTROPINE
Health hazard 2
Flammability 0
Physical hazards 0

NFPA Rating
Health hazard 2
Fire 2
Reactivity Hazard 0

Potential Health Effects
Inhalation May be harmful if inhaled. Causes respiratory tract irritation
Skin May be harmful if absorbed through skin. Causes skin irritation
Eyes Causes eye irritation
Ingestion May be harmful if swallowed

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

Synonyms
1,3-Benzodioxole-5-carboxaldehyde
3,4-(Methylenedioxy)benzaldehyde
Heliotropin

Formula C8 H6 O3
Molecular Weight 150.13 g/mol
CAS-No 120-57-0
EC-No 204-409-7

4. FIRST-AID GUIDE:

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

In case of skin contact
Wash off with soap and plenty of water. Consult a physician

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

5. FIRE-FIGHTING GUIDE:
Conditions of flammability
Not flammable or combustible

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special protective equipment for firefighters
Wear self contained breathing apparatus for firefighting if necessary

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE GUIDE:

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal

7. HANDLING AND STORAGE:

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Light sensitive

8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values

Personal protective equipment
Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
Hand 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.

Eye protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin and body protection
Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

9. PHYSICAL AND CHEMICAL PROPERTIES:

<table>
<thead>
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<th>Appearance</th>
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<tbody>
<tr>
<td>Form</td>
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<tr>
<td>Color</td>
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<table>
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<tr>
<th>Safety data</th>
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<tbody>
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<tr>
<td>Melting point/freezing point</td>
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<tr>
<td>Boiling point</td>
<td>263 °C (505 °F) at 1,013 hPa (760 mmHg)</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Ignition temperature</td>
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</tr>
<tr>
<td>Auto ignition temperature</td>
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<td>Lower explosion limit</td>
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<tr>
<td>Upper explosion limit</td>
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<td>Vapor pressure</td>
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<tr>
<td>Odor</td>
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<tr>
<td>Odor Threshold</td>
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<tr>
<td>Evaporation rate</td>
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10. STABILITY AND REACTIVITY:

Chemical stability
Stable under recommended storage conditions

**Possibility of hazardous reactions**
No data available

**Conditions to avoid**
No data available

**Materials to avoid**
Strong oxidizing agents, Strong bases

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. **TOXICOLOGICAL INFORMATION:**

**Acute toxicity**

**Oral LD50**
LD50 Oral - rat - 2,700 mg/kg

**Inhalation LC50**
No data available

**Dermal LD50**
LD50 Dermal - rat - > 5,000 mg/kg

**Other information on acute toxicity**
No data available

**Skin corrosion/irritation**
Skin - guinea pig - Skin irritation - 48 h

**Serious eye damage/eye irritation**
Eyes - rabbit - Mild eye irritation - 48 h

**Respiratory or skin sensitization**
No data available

**Germ cell mutagenicity**
Genotoxicity in vitro - Human - lymphocyte
Sister chromatid exchange
Genotoxicity in vitro - Chicken - Embryo
Sister chromatid exchange
Carcinogenicity

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

ACGIH
No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

NTP
No components 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 components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Reproductive toxicity
No data available

Teratogenicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Potential health effects
Inhalation May be harmful if inhaled. Causes respiratory tract irritation
Ingestion May be harmful if swallowed
Skin May be harmful if absorbed through skin. Causes skin irritation
Eyes Causes eye irritation

Signs and Symptoms of Exposure
Central nervous system depression, to the best of our knowledge, the chemical, physical, and toxicological properties has not been thoroughly investigated. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effects
No data available
Additional Information
RTECS: TO1575000

12. ECOLOGICAL INFORMATION:

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

PBT and vPvB assessment
No data available

Other adverse effects
Harmful to aquatic life
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
No data available

13. DISPOSAL RECOMMENDATIONS:

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product

14. TRANSPORTATION INFORMATION:

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods
15. REGULATORY INFORMATION:

OSHA Hazards
Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components
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

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right to Know Components
No components are subject to the Massachusetts Right to Know Act

Pennsylvania Right to Know Components
Piperonal CAS-No 120-57-0

New Jersey Right to Know Components
Piperonal CAS-No 120-57-0

California Prop 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

16. OTHER INFORMATION:

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U’s control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance.