



Material Safety Data Sheet

1. Chemical Identification

Product Name: Gramine

CAS No. : 87-52-5

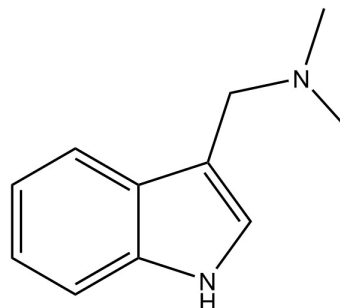
Mol. Formula: C₁₁H₁₄N₂

Mol. Weight: 174.24

Botanical Source: Asparagus

Company: Chengdu Pufei De Biotech Co.,
Ltd

Structure:



2. Hazards identification

CAUTION: May be harmful to skin and eyes if swallowed, inhaled or absorbed through skin. The chemical, Physical and toxicological properties of this product have not been thoroughly investigated. Exercise due care.

3. First-aid measures

If swallowed : Give large quantities of water to drink and get medical attention immediately, never give anything by mouth to an unconscious person. Call a physician.

If inhaled: Remove to fresh air. If breathing becomes difficult, Call a physician .

If Contact with eye : Flush with copious amounts of water at least 15 minutes, Assure adequate Flushing by separating the eyelids with fingers. Call a physician.

5. Fire-fighting measures

Extinguishing Media:

carbon dioxide, dry chemical power or appropriate form.

Special fire-fighting procedures:

Wear self-contained breathing apparatus and protective clothing to prevent with skin and



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MSDS of Gramine

eyes. Full turnout gear.

Unusual fire and explosions hazard:

Not considered to be a fire hazard nor an explosions hazard.

6、Accidental release measures

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

Sweep up, place in a bag and hold for waste disposal.

Avoid raising dust. Pickup and place in a suitable container for disposal in a method that does not generate dust.

Ventilate area and wash spill site after material pickup is complete.

7、Handling and storage

Store in a cool (0-10°C) and desiccated environment and protected from light.

Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8、Exposure controls/personal protection

NIOSH/MSHA-approved respirator.

Mechanical exhaust.

Compatible chemical-resistant gloves.

Chemical safety goggles.

9、Physical and chemical properties

Physical state : White powder

Color : White powder

Molecular Weight :174.24

Solubility:Soluble in Methanol, DMSO

10、Stability and reactivity

Stability:

They all stable under ordinary conditions of use and storage.

Hazardous combustion or decomposition products:

Not yet available.

Hazardous Polymerization:



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Not yet available.

11、Toxicological information

Skin irritation: Not available.

Acute toxicity: Not available.

Carcinogenic effects: Not available.

Mutagenic effects: Not available.

Reproduction effects: Not available.

Teratogenic effects: Not available.

12、Ecological information

Ecotoxicity: Not available

13、Disposal considerations

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, State and Local Environmental Regulations.

14、Transport information

FEDEX

15、Regulatory information

Data is not available.

16、Other information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The information presented herein is believed to be accurate and representative of currently accepted technical literature. However, Chengdu Pufei De Biotech Co., Ltd does not mean to imply its completeness or comprehensiveness. Therefore, we suggest the use of this information solely as a guide in the use and handling of this product, and further urge the user to determine the suitability of this material for any particular purpose. Chengdu Pufei De Biotech Co., Ltd shall not be held liable for any damages resulting from sole reliance on this information.