Supplier       TCI America
               9211 N. Harborgate St.
               Portland, OR 97203
               1-800-423-8616

In case of Emergency Call

Chemtrec®
(800) 424-9300 (U.S.)
(703) 527-3887 (International)
SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: Matrine
Product code: M2120
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
Address: 4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
Responsible Department: Global Business Department
Telephone: +81-3-5640-8872
Fax: +81-3-5640-8902
e-mail: globalbusiness@tokyokasei.co.jp
Revision number: 4

2. HAZARDS IDENTIFICATION

Classification of the GHS
PHYSICAL HAZARDS Not classified
HEALTH HAZARDS Not classified
ENVIRONMENTAL HAZARDS Not classified

GHS label elements
Pictograms or hazard symbols None
Signal word No signal word
Hazard statement None
Precautionary statements None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance
Component(s): Matrine
Percent: >98.0%(GC)(T)
CAS Number: 519-02-8
Chemical Formula: C15H24N2O

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact: 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.
Ingestion: Get medical advice/attention if you feel unwell. Rinse mouth.

Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.
Specific hazards: Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
5. FIRE-FIGHTING MEASURES
Specific methods:
Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.
Special protective equipment for firefighters:
When extinguishing fire, be sure to wear personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:
Prevent product from entering drains.
Methods and materials for containment and cleaning up:
Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE
Handling
Technical measures:
Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a local exhaust if dust or aerosol will be generated.
Advice on safe handling:
Avoid contact with skin, eyes and clothing.
Storage
Storage conditions:
Keep container tightly closed. Store in a refrigerator. Store away from incompatible materials such as oxidizing agents.
Packaging material:
Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering controls:
Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.
Control parameters:
Not set up
Personal protective equipment
Respiratory protection:
Dust respirator. Follow local and national regulations.
Hand protection:
Protective gloves.
Eye protection:
Safety glasses. A face-shield, if the situation requires.
Skin and body protection:
Protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES
Physical state (20°C):
Solid
Form:
crystal - powder
Color:
White - Almost white
Odor:
No data available
pH:
No data available
Melting point/freezing point:
85°C
Boiling Point/Range:
223°C/0.8kPa
Flash Point:
No data available
Explosive limits
Lower:
No data available
Upper:
No data available
Density:
No data available
Solubility:
No data available
\( \log Pow = 1.71 \)

10. STABILITY AND REACTIVITY
Stability:
Stable under proper conditions.
Reactivity:
No special reactivity has been reported.
Conditions to avoid:
Heat-sensitive
Incompatible materials:
oxidizing agents
10. STABILITY AND REACTIVITY
   Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION
   Acute Toxicity: ipr-rat LD50:125 mg/kg
   Skin corrosion/irritation: No data available
   Serious eye damage/irritation: No data available
   Germ cell mutagenicity: No data available
   Carcinogenicity:
      IARC = No data available
      NTP = No data available
   Reproductive toxicity: No data available
   RTECS Number: OQ1754000

12. ECOLOGICAL INFORMATION
   Ecotoxicity:
      Fish: No data available
      Crustacea: No data available
      Algae: No data available
   Persistence / degradability: No data available
   Bioaccumulative potential (BCF): No data available
   Mobility in soil
      log Pow: 1.71
      Soil adsorption (Koc): No data available
   Henry's Law constant (PaM^3/mol):

13. DISPOSAL CONSIDERATIONS
   Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material
   with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system.
   Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION
   Hazards Class: Does not correspond to the classification standard of the United Nations
   UN-No: Not Listed

15. JAPANESE REGULATORY INFORMATION
   • Not applicable

16. OTHER INFORMATION
   The reference company name of written contents
   Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
   Address: 4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
   Department: Global Business Department
   Telephone: +81-3-5640-8872
   Fax: +81-3-5640-8902

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data
contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws
and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to
be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be
used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In
case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be
treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or
the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience
or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's
own responsibility.