

Material Safety Data Sheet

Version 1.0

Revision Date 11/20/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Tetrandrine

Product Number : CN000248

Brand : PUSH

Company : Chengdu Push Bio-technology Co., Ltd.

No.8 West Wuke second road, Wuhou District, Chengdu City, Sichuan

Province, China

Telephone : 86-28-85370565-215

Fax : 86-28-85370565-777

Emergency Phone # : 86-28-85370565-215

2. HAZARDS IDENTIFICATION

OSHA Hazards

Target Organ Effect. Harmful by ingestion.

Target Organs

Immune system.

GHS Label elements, including precautionary statements

Pictogram



Signal word **Danger**

Hazard statement(s)

H302 Harmful if swallowed.

No.8 Wuke West Second Road, Wuhou district , Chengdu,Sichuan ,China,610045

Tel: 86-28-85370565-215

Fax: 86-28-85370565-777

Website: <http://www.push-herbchem.com>

Precautionary statement(s)

P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

HMIS Classification**Health hazard:** 0**Flammability:** 0**Physical hazards:** 0**NFPA Rating****Health hazard:** 0**Fire:** 0**Reactivity Hazard:** 0**Potential Health Effects****Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.**Skin** May be harmful if absorbed through skin. May causes skin irritation.**Eyes** May causes eye irritation.**Ingestion** Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical Name:** Tetrandrine**CAS#:** 518-34-3

Formula: $C_{38}H_{42}N_2O_6$

Molecular Weight: 622.762

4. FIRST AID MEASURES

General advice

Consult a doctor.

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 doctor.

In case of skin contact

Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

If swallowed

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

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

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

Conditions for safe storage

Keep container tightly closed.

Recommended storage temperature: 2 – 8 °C

Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99(US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses.

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

White solid

Safe data

pH	no data available
Melting point	217.5 °C
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available
Solubility	Methanol, Chloroform

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Acute toxicity data

Type of test	Route	Species	Dose
LD ₅₀	Intraperitoneal	Rodent - mouse	41300 ug/kg
LD ₅₀	Intravenous	Rodent - mouse	37500 ug/kg
LD _{Lo}	Intravenous	Mammal - cat	40 mg/kg
LD _{Lo}	Intravenous	Rodent - rabbit	15 mg/kg

Other multiple dose toxicity data

no data available

Tumorigenic data

no data available

Mutation data

Type of test	System	Dose
Mutation in microorganisms	Bacteria - Salmonella typhimurium	750 ug/plate
DNA inhibition	Rodent - mouse Cells	100 mg/L
Mutation test systems	Rodent - mouse Cells	100 mg/L
Sister chromatid exchange	Rodent - mouse	100 mg/kg
Sister chromatid exchange	Rodent - hamster Lung	80 mg/L

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
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Ingestion	Harmful if swallowed.
Skin	May be harmful if absorbed through skin. May causes skin irritation.
Eyes	May causes eye irritation.

Signs and Symptoms of Exposure

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

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

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect. Harmful by ingestion.

DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

16H-1,24:6,9-Dietheno-11,15-metheno-2H-pyrido[2',3':17,18][1,11]dioxacycloeicosino[2,3,4-ij]i
soquinoline, 3,4,4a,5,16a,17,18,19-octahydro-12,21,22,26-tetramethoxy-4,17-dimethyl-,
(4aS,16aS)-

CAS-No. 518-34-3

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 thresh

(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

16H-1,24:6,9-Dietheno-11,15-metheno-2H-pyrido[2',3':17,18][1,11]dioxacycloeicosino[2,3,4-ij]i
soquinoline, 3,4,4a,5,16a,17,18,19-octahydro-12,21,22,26-tetramethoxy-4,17-dimethyl-,
(4aS,16aS)-

CAS-No. 518-34-3

New Jersey Right To Know Components

16H-1,24:6,9-Dietheno-11,15-metheno-2H-pyrido[2',3':17,18][1,11]dioxacycloeicosino[2,3,4-ij]i
soquinoline, 3,4,4a,5,16a,17,18,19-octahydro-12,21,22,26-tetramethoxy-4,17-dimethyl-,
(4aS,16aS)-

CAS-No. 518-34-3

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

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.