

Material Safety Data Sheet

Version 1.0

Revision Date 11/20/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Aristolochic acid A

Product Number : CN000417

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

Toxic by ingestion.

GHS Label elements, including precautionary statements

Pictogram



Signal word **Danger**

Hazard statement(s)

H301 Toxic if swallowed.

Precautionary statement(s)

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and

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>



- understood.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P302+P352 IF ON SKIN: wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P311 Call a POISON CENTER or doctor/physician if you feel unwell.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P322 Specific measures(see supplemental first aid instructions on this label).
- P330 Rinse mouth.
- P361 Take off immediately all contaminated clothing.
- P363 Wash contaminated clothing before reuse.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 2

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 Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Aristolochic acid A

CAS#: 313-67-7

Formula: $C_{17}H_{11}NO_7$

Molecular Weight: 341.275

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:

Yellow solid

Safe data

pH	no data available
Melting point	278 °C (decomp)
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	DMSO, DMF

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents and strong reducing agents.

Hazardous decomposition products

Carbon monoxide, Carbon dioxide, Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data

Type of test	Route	Species	Dose
LD _{Lo}	Intravenous	Human - man	3 mg/kg/2D-I
LD ₅₀	Oral	Rodent - rat	184 mg/kg
LD ₅₀	Intravenous	Rodent - rat	74 mg/kg
LD ₅₀	Oral	Rodent - mouse	55900 ug/kg
LD ₅₀	Intraperitoneal	Rodent - mouse	14320 ug/kg
LD ₅₀	Intravenous	Rodent - mouse	38400 ug/kg
LD _{Lo}	Intravenous	Mammal - cat	40 mg/kg
LD _{Lo}	Intraperitoneal	Rodent - rabbit	1500 ug/kg

Other multiple dose toxicity data

Type of test	Route	Species	Dose
TD _{Lo}	Intraperitoneal	Rodent - mouse	22 mg/kg/11D-I

Tumorigenic data

Type of test	Route	Species	Dose
TD _{Lo}	Oral	Rodent - mouse	105 mg/kg/3W-C

Mutation data

Type of test	System	Dose
Mutation in microorganisms	Bacteria - Salmonella typhimurium	50 ug/plate
Mutation in microorganisms	Bacteria - Salmonella typhimurium	200 ug/plate

Sex chromosome loss and nondisjunction	Insect - Drosophila melanogaster	50 umol/L
Cytogenetic analysis	Human Lymphocyte	1 mg/L
Sister chromatid exchange	Human Lymphocyte	5 mg/L
DNA adduct	Rodent - rat	40 mg/kg/2W
Mutation in mammalian somatic cells	Rodent - rat	45 mg/kg
Mutation in mammalian somatic cells	Rodent - rat Fibroblast	20 mg/L
Mutation in mammalian somatic cells	Rodent - rat	320 ug/kg
Mutation in mammalian somatic cells	Rodent - hamster Ovary	50 umol/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.
Ingestion	Toxic 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)**

UN-Number: 1544

Class: 6.1 Toxic substances

Packing group: III

Alkaloid salts, solid, n.o.s (poisonous)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1544

Class: 6.1 Toxic substances

Packing group: III

EMS-No: F-A, S-A

Alkaloid salts, solid, n.o.s (poisonous)

Marine pollutant: No

IATA

UN-Number: 1544

Class: 6.1 Toxic substances

Packing group: III

Alkaloid salts, solid, n.o.s (poisonous)

15. REGULATORY INFORMATION

OSHA Hazards

Toxic by ingestion.

DSL Status

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

Phenanthro[3,4-d]-1,3-dioxole-5-carboxylic acid, 8-methoxy-6-nitro-

CAS-No. 313-67-7

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

Phenanthro[3,4-d]-1,3-dioxole-5-carboxylic acid, 8-methoxy-6-nitro-

CAS-No. 313-67-7

New Jersey Right To Know Components

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>

Phenanthro[3,4-d]-1,3-dioxole-5-carboxylic acid, 8-methoxy-6-nitro-

CAS-No. 313-67-7

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.