



# SAFETY DATA SHEET

Creation Date 23-Apr-2004

Revision Date 17-Aug-2018

Revision Number 4

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identification

Product Description: Aristolochic acid, mixture of I and II  
Cat No. : 226090000; 226091000; 226095000  
CAS-No 313-67-7  
EC-No. 206-238-3  
Molecular Formula C<sub>17</sub> H<sub>11</sub> N O<sub>7</sub>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### 1.3. Details of the supplier of the safety data sheet

Company Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium  
E-mail address begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

##### Physical hazards

Based on available data, the classification criteria are not met

##### Health hazards

Acute oral toxicity  
Carcinogenicity

Category 3 (H301)  
Category 1A (H350)

##### Environmental hazards

Based on available data, the classification criteria are not met

### 2.2. Label elements

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Signal Word

Danger

## Hazard Statements

H301 - Toxic if swallowed

H350 - May cause cancer

## Precautionary Statements

P264 - Wash face, hands and any exposed skin thoroughly after handling

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician

P201 - Obtain special instructions before use

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P308 + P313 - IF exposed or concerned: Get medical advice/ attention

## Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

No information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component                                                           | CAS-No   | EC-No.            | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|---------------------------------------------------------------------|----------|-------------------|----------|---------------------------------------------------|
| 8-Methoxy-3,4-methylenedioxy-10-nitrophenanthrene-1-carboxylic acid | 313-67-7 | EEC No. 206-238-3 | >95      | Carc. 1A (H350)<br>Acute Tox. 3 (H301)            |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### Eye Contact

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

#### Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately.

#### Inhalation

Move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

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method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Self-Protection of the First Aider** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## **4.2. Most important symptoms and effects, both acute and delayed**

None reasonably foreseeable.

## **4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### **5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### **5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### **6.2. Environmental precautions**

Should not be released into the environment.

### **6.3. Methods and material for containment and cleaning up**

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

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## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Avoid dust formation. Use only under a chemical fume hood. Do not breathe vapors/dust. Do not ingest.

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from direct sunlight. To maintain product quality: Keep refrigerated.

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### **Exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Derived No Effect Level (DNEL)** No information available

| <u>Route of exposure</u> | <b>Acute effects (local)</b> | <b>Acute effects (systemic)</b> | <b>Chronic effects (local)</b> | <b>Chronic effects (systemic)</b> |
|--------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Oral                     |                              |                                 |                                |                                   |
| Dermal                   |                              |                                 |                                |                                   |
| Inhalation               |                              |                                 |                                |                                   |

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or

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equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

## Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |
| Neoprene       |                                   |                 |             |                       |
| Natural rubber |                                   |                 |             |                       |
| PVC            |                                   |                 |             |                       |

**Skin and body protection** Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Particulates filter conforming to EN 143

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Particle filtering: EN149:2001  
When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                                   |                               |                                          |
|-----------------------------------|-------------------------------|------------------------------------------|
| <b>Appearance</b>                 | Yellow                        |                                          |
| <b>Physical State</b>             | Powder Solid                  |                                          |
| <b>Odor</b>                       | No information available      |                                          |
| <b>Odor Threshold</b>             | No data available             |                                          |
| <b>pH</b>                         | No information available      |                                          |
| <b>Melting Point/Range</b>        | 269 - 270 °C / 516.2 - 518 °F |                                          |
| <b>Softening Point</b>            | No data available             |                                          |
| <b>Boiling Point/Range</b>        | No information available      |                                          |
| <b>Flash Point</b>                | No information available      | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>           | Not applicable                | Solid                                    |
| <b>Flammability (solid,gas)</b>   | No information available      |                                          |
| <b>Explosion Limits</b>           | No data available             |                                          |
| <b>Vapor Pressure</b>             | No data available             |                                          |
| <b>Vapor Density</b>              | Not applicable                | Solid                                    |
| <b>Specific Gravity / Density</b> | No data available             |                                          |
| <b>Bulk Density</b>               | No data available             |                                          |

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|                                         |                          |       |
|-----------------------------------------|--------------------------|-------|
| Water Solubility                        | Slightly soluble         |       |
| Solubility in other solvents            | No information available |       |
| Partition Coefficient (n-octanol/water) |                          |       |
| Autoignition Temperature                | Not applicable           |       |
| Decomposition Temperature               | No data available        |       |
| Viscosity                               | Not applicable           | Solid |
| Explosive Properties                    | No information available |       |
| Oxidizing Properties                    | No information available |       |

## 9.2. Other information

|                   |              |
|-------------------|--------------|
| Molecular Formula | C17 H11 N O7 |
| Molecular Weight  | 341.27       |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | None under normal processing.            |

### 10.4. Conditions to avoid

Excess heat. Exposure to light. Incompatible products.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Alkaline.

### 10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Product Information

#### (a) acute toxicity;

|            |                   |
|------------|-------------------|
| Oral       | Category 3        |
| Dermal     | No data available |
| Inhalation | No data available |

| Component                                                           | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|---------------------------------------------------------------------|--------------------------|-------------|-----------------|
| 8-Methoxy-3,4-methylenedioxy-10-nitrophenanthrene-1-carboxylic acid | LD50 = 184 mg/kg ( Rat ) |             |                 |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

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**(d) respiratory or skin sensitization;**

Respiratory No data available  
Skin No data available

**(e) germ cell mutagenicity;**

No data available

Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making a satisfactory assessment

**(f) carcinogenicity;**

Category 1A

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component                                                           | EU | UK | Germany | IARC    |
|---------------------------------------------------------------------|----|----|---------|---------|
| 8-Methoxy-3,4-methylenedioxy-10-nitrophenanthrene-1-carboxylic acid |    |    |         | Group 1 |

**(g) reproductive toxicity;**

No data available

**(h) STOT-single exposure;**

No data available

**(i) STOT-repeated exposure;**

No data available

**Target Organs**

None known.

**(j) aspiration hazard;**

Not applicable  
Solid

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** No information available

## SECTION 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

**Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**12.2. Persistence and degradability**

**Persistence**

based on information available, May persist.

**12.3. Bioaccumulative potential**

May have some potential to bioaccumulate

**12.4. Mobility in soil**

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Is not likely mobile in the environment due to its low water solubility. Highly mobile in soils

**12.5. Results of PBT and vPvB assessment**

No data available for assessment.

**12.6. Other adverse effects**

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|                                 |                                                                           |
|---------------------------------|---------------------------------------------------------------------------|
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors |
| Persistent Organic Pollutant    | This product does not contain any known or suspected substance            |
| Ozone Depletion Potential       | This product does not contain any known or suspected substance            |

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

|                                       |                                                                                                                                                                        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste from Residues / Unused Products | Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. |
| Contaminated Packaging                | Dispose of this container to hazardous or special waste collection point.                                                                                              |
| European Waste Catalogue (EWC)        | According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.                                                             |
| Other Information                     | Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.                                          |

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

|                                  |                         |
|----------------------------------|-------------------------|
| 14.1. UN number                  | UN1544                  |
| 14.2. UN proper shipping name    | ALKALOIDS, SOLID, N.O.S |
| Technical Shipping Name          | Aristolochic acid       |
| 14.3. Transport hazard class(es) | 6.1                     |
| 14.4. Packing group              | III                     |

### ADR

|                                  |                         |
|----------------------------------|-------------------------|
| 14.1. UN number                  | UN1544                  |
| 14.2. UN proper shipping name    | ALKALOIDS, SOLID, N.O.S |
| Technical Shipping Name          | Aristolochic acid       |
| 14.3. Transport hazard class(es) | 6.1                     |
| 14.4. Packing group              | III                     |

### IATA

|                                  |                              |
|----------------------------------|------------------------------|
| 14.1. UN number                  | UN1544                       |
| 14.2. UN proper shipping name    | ALKALOID SALTS, SOLID, N.O.S |
| Technical Shipping Name          | Aristolochic acid            |
| 14.3. Transport hazard class(es) | 6.1                          |
| 14.4. Packing group              | III                          |

|                                                                               |                                 |
|-------------------------------------------------------------------------------|---------------------------------|
| 14.5. Environmental hazards                                                   | No hazards identified           |
| 14.6. Special precautions for user                                            | No special precautions required |
| 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable, packaged goods  |

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

|                           |             |
|---------------------------|-------------|
| International Inventories | X = listed. |
|---------------------------|-------------|

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| Component                                                           | EINECS    | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL |
|---------------------------------------------------------------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| 8-Methoxy-3,4-methylenedioxy-10-nitrophenanthrene-1-carboxylic acid | 206-238-3 | -      |     | -    | -   | -    | -     | -    | -     | -    | -    |

## National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.  
Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed

H350 - May cause cancer

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - Volatile Organic Compounds

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

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## Revision Summary

SDS sections updated: 2, 3, 7, 9, 14.

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**