SAFETY DATA SHEET

ALLANTOIN

Identification of the company:
Clariant Corporation
4000 Monroe Road
Charlotte, NC, 28205
Telephone No.: +1 704 331 7000

Information of the substance/preparation:
Product Safety 1-704-331-7710
Emergency tel. number: +1 800-424-9300 CHEMTREC

Trade name: ALLANTOIN
Material number: 105266
CAS number: 97-59-6
Synonyms: Product Has No Synonyms
Primary product use: Raw material for cosmetics
Chemical family: 5-Ureido-Hydantoin

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Combustible dust:

GHS Label element
Signal word: Warning
Hazard statements: May form combustible dust concentrations in air
Precautionary statements:
Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take precautionary measures against static discharge.
P233 Keep container tightly closed.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>Not Assigned</td>
<td>100</td>
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</table>
SECTION 4. FIRST AID MEASURES

General advice: Remove contaminated clothing and shoes. Ensure that the First Aid Personnel are aware of the product involved, and take precautions to protect themselves (e.g. wear personal protection equipment).

If inhaled: Move the victim to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical advice/attention. Never give anything by mouth to an unconscious person.

In case of skin contact: Immediately flush skin under running water for at least fifteen minutes. Seek medical attention if irritation or chemical burn is present.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

If swallowed: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed: The possible symptoms known are those derived from the labelling (see section 2). No additional symptoms are known.

Notes to physician: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Foam
Water mist

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: In case of fire hazardous decomposition products may be produced such as:
- Carbon monoxide
- Carbon dioxide (CO2)
- Nitrogen oxides (NOx)

Emits toxic fumes under fire conditions. This product presents no unusual fire or explosion hazards while sealed in a shipping container. During usage, if a dust cloud is generated, organic powders have the potential to be explosive with static spark or flame initiation.
Further information: Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

Special protective equipment for firefighters: Self-contained breathing apparatus, Full protective suit

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation.
Wear suitable protective equipment.
Wear suitable protective equipment. Collect for disposal.
Avoid discharge into sewers, on ground or into any body of water.

Environmental precautions: Do not allow to enter drains or waterways

Methods and materials for containment and cleaning up: Take up mechanically
Can be landfilled or incinerated, when in compliance with local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Observe the general rules of industrial fire protection

Advice on safe handling: Store in cool, dry area. Avoid excessive heat. Keep away from sources of heat, sparks or open flames.

Conditions for safe storage: Keep only in the original container.

Technical measures/Precautions: Store in original container.
Keep container closed.

Materials to avoid: Avoid storage near incompatibile agents (see section 10).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures: Provide adequate ventilation.
Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.
Personal protective equipment

Respiratory protection: If airborne concentrations pose a health hazard, become irritating, or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29CFR1910.134.

Hand protection
Remarks: Butyl Rubber, PVC Or Neoprene.

Eye protection: Safety glasses or chemical splash goggles.

Skin and body protection: Protective clothing to minimize skin contact should be worn. Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.

Protective measures: Observe the usual precautions for handling chemicals. Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with skin and eyes. Do not breathe dust.

Hygiene measures: Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: powder

Colour: white

Odour: odourless

Odour Threshold: not available

pH: 4. - 6, Concentration: 5 g/l

Melting point: 226 - 232 °C Method: OECD Test Guideline 102 Decomposition

Boiling point: Decomposes below the boiling point.

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability (solid, gas): The product is not flammable.
Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
Vapour pressure : < 0.000010 hPa (20 °C)
                 Method: other (calculated)
Relative vapour density : Not applicable
Relative density : 1.70 - 1.72 (22 °C)
                  Method: OECD Test Guideline 109
                  GLP: yes
Density : 1.71 g/cm³ (22 °C)
         Method: OECD Test Guideline 109
Bulk density : approx. 600 kg/m³
Solubility(ies)
  Water solubility : 4.9 g/l (20 °C)
                   Method: OECD Test Guideline 105
                   GLP: no
Solubility in other solvents : not available
Partition coefficient: n-octanol/water : log Pow: -2.26 (20 °C)
                                      Method: OECD Test Guideline 107
                                      GLP: no
Auto-ignition temperature : Not applicable
Decomposition temperature : 227 °C
                           Method: DSC
Viscosity
  Viscosity, dynamic : Not applicable
  Viscosity, kinematic : Not applicable
Flow time : Not applicable
Explosive properties : Not explosive
                      Method: Expert judgement
Oxidizing properties : The substance or mixture is not classified as oxidizing.
                        Method: Expert judgement
SECTION 10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: The product is not a dust explosion risk as supplied; however, the build-up of fine dust can lead to a risk of dust explosions.

Conditions to avoid: Not known.

Incompatible materials: Not known.

Hazardous decomposition products: Carbon monoxide and carbon dioxide, Nitrogen oxides (NOx).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Eye contact
Skin contact
Ingestion
Inhalation

Acute toxicity:
Product:
Acute oral toxicity: LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: Yes

Acute inhalation toxicity: Remarks: It was demonstrated that during intended and foreseeable applications, no respirable aerosol is formed.

Acute dermal toxicity: LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation:
Product:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: Yes

Serious eye damage/eye irritation:
Product:
Species: rabbit eye  
Result: No eye irritation  
Method: OECD Test Guideline 405  
GLP: yes

**Respiratory or skin sensitisation**

**Product:**  
Test Type: Mouse local lymphnode assay  
Method: OECD Test Guideline 429  
Result: non-sensitizing  
GLP: yes

**Germ cell mutagenicity**

**Product:**  
Germ cell mutagenicity - Assessment  : Not mutagenic in Ames Test

**Carcinogenicity**

**Product:**  
Remarks: not available

- IARC: Not listed
- OSHA: Not listed
- NTP: Not listed

**Reproductive toxicity**

**Product:**  
Effects on fertility  : Remarks: not available
  
Effects on foetal development  : Remarks: not available

**STOT - single exposure**

**Product:**  
Remarks: not available

**STOT - repeated exposure**

**Product:**  
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity

Product: 
Remarks: not available

Aspiration toxicity

Product: 
no data available

Experience with human exposure

Product: 
General Information: The possible symptoms known are those derived from the labelling (see section 2).

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product: 
Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 5,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae: EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Toxicity to fish (Chronic toxicity): Remarks: not required

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): Remarks: not required

Toxicity to bacteria: EC0 (Pseudomonas putida): > 10 g/l
Exposure time: 3 h
Method: OECD Test Guideline 209
GLP:
Persistence and degradability

Product:
Biodegradability: Biodegradation: 76 %
Exposure time: 29 d
Method: OECD Test Guideline 301B
Remarks: Readily biodegradable, according to appropriate OECD test.

Biochemical Oxygen Demand (BOD): 63.8 mg/g

Chemical Oxygen Demand (COD): 240 mg/g

Physico-chemical removability: Remarks: Readily biodegradable, according to appropriate OECD test.

Bioaccumulative potential

Product:
Bioaccumulation: Remarks: Due to the low logPow bioaccumulation is not expected

Mobility in soil

Product:
Distribution among environmental compartments: Remarks: Not expected to adsorb on soil.

Other adverse effects

Product:
Environmental fate and pathways: Remarks: not available

Results of PBT and vPvB assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Additional ecological information: The product should not be allowed to enter drains, water courses or the soil. Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste Code : N0NE
Waste from residues : Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.
Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14. TRANSPORT INFORMATION

DOT : not restricted
IATA : not restricted
IMDG : not restricted

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards
SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 : This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

Clean Water Act
Contains no known priority pollutants at concentrations greater than 0.1%.

The components of this product are reported in the following inventories:
TSCA : On TSCA Inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information
Observe national and local legal requirements
Observe all necessary precautions for handling fine powders to control dust. May present dust explosion hazard. Reference exposure limit: ACGIH (TLV) for particulate matter - 10 mg/m³ inhalable particulates, 3 mg/m³ respirable particulates. OSHA Permissible Limit (PEL) for particulate matter: total dust: 15 mg/m³; respirable fraction: 5 mg/m³

Revision Date : 05/12/2015

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.