1 Identification

· Product identifier
· Trade name: Diminazene (aceturate)
· Synonym 4,4’-(1-triazene-1,3-diyl)bis[benzenecarboximidamide] compd. with N-acetyl-glycine (1:2)
· Article number: 18678
· CAS Number: 908-54-3
· EC number: 212-999-2
· Application of the substance / the mixture For research use only, not for human or veterinary use.
· Details of the supplier of the safety data sheet
· Manufacturer/Supplier: Cayman Chemical Co.
  1180 E. Ellsworth Rd.
  Ann Arbor, MI 48108
  USA
· Information department: Product safety department
· Emergency telephone number:
  During normal opening times: +1 (734) 971-3335
  US/CANADA: 800-424-9300
  Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture
  The substance is not classified, according to the Globally Harmonized System (GHS).
· Label elements
· GHS label elements None
· Hazard pictograms None
· Signal word None
· Hazard statements None
· Classification system:
· NFPA ratings (scale 0 - 4)
  Health = 0
  Fire = 0
  Reactivity = 0
· HMIS-ratings (scale 0 - 4)
  HEALTH Health = 0
  FIRE Fire = 0
  REACTIVITY Reactivity = 0
· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.

(Contd. on page 2)
Trade name: Diminazene (aceturate)

· vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Substances
  - **CAS No. Description**
    - 908-54-3 Diminazene (aceturate)
  - **Identification number(s)**
  - **EC number:** 212-999-2

### 4 First-aid measures

- **Description of first aid measures**
  - **General information:** No special measures required.
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Generally the product does not irritate the skin.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed**
    May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.
  - **Indication of any immediate medical attention and special treatment needed**
    No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**
    Use fire fighting measures that suit the environment.
    A solid water stream may be inefficient.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:** Substance is not listed.
  - **PAC-2:** Substance is not listed.
7 Handling and storage

· Handling:
  · Precautions for safe handling: No special measures required.
  · Information about protection against explosions and fires: No special measures required.

· Conditions for safe storage, including any incompatibilities
  Keep container tightly closed.
  Store in accordance with information listed on the product insert.

· Storage:
  · Requirements to be met by storerooms and receptacles: No special requirements.
  · Information about storage in one common storage facility: Not required.
  · Further information about storage conditions: None.
  · Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters
  · Components with limit values that require monitoring at the workplace:
    The following constituent is the only constituent of the product which has a PEL, TLV or other
    recommended exposure limit.
    The following constituents are the only constituents of the product which have a PEL, TLV or other
    recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.
    At this time, the other constituents have no known exposure limits.
  · Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
  · Personal protective equipment:
    · General protective and hygienic measures:
      The usual precautionary measures for handling chemicals should be followed.
    · Breathing equipment: Not required.
    · Protection of hands:
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      Due to missing tests no recommendation to the glove material can be given for the product/ the
      preparation/ the chemical mixture.
      Selection of the glove material on consideration of the penetration times, rates of diffusion and the
      degradation
    · Material of gloves
      The selection of the suitable gloves does not only depend on the material, but also on further marks of
      quality and varies from manufacturer to manufacturer.
    · Penetration time of glove material
      The exact break through time has to be found out by the manufacturer of the protective gloves and has
      to be observed.
    · Eye protection: Not required.
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Crystalline
      - Color: Not determined.
    - Odor: Characteristic
  - Structural Formula: C14H15N7 • 2C4H7NO3
  - Molecular Weight: 515.5 g/mol
  - Odor threshold: Not determined.
  - pH-value: Not applicable.

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Flammability (solid, gaseous): Product is not flammable.
- Decomposition temperature: Not determined.
- Auto igniting: Not determined.
- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapor pressure: Not applicable.
- Density: Not determined.
- Relative density: Not determined.
- Vapor density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with
  - Water: Not determined.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
  - SOLUBILITY: DMSO; ~75 mM in H2O
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: strong oxidizing agents

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11 Toxicological information

- RTECS Number MB7605000
- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - Subcutaneous LD50: 258 mg/kg (mouse), 663 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
    - The substance is not subject to classification.
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer) Substance is not listed.
  - NTP (National Toxicology Program) Substance is not listed.
  - OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Smaller quantities can be disposed of with household waste.
14 Transport information

· UN-Number
  ∙ DOT, IMDG, IATA not regulated

· UN proper shipping name
  ∙ DOT, IMDG, IATA not regulated

· Transport hazard class(es)
  ∙ DOT, ADN, IMDG, IATA not regulated
    ∙ Class not regulated

· Packing group
  ∙ DOT, IMDG, IATA not regulated

· Environmental hazards:
  Not applicable.

· Special precautions for user:
  Not applicable.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  Not applicable.

· UN "Model Regulation": not regulated

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  ∙ Sara
    ∙ Section 355 (extremely hazardous substances): Substance is not listed.
    ∙ Section 313 (Specific toxic chemical listings): Substance is not listed.
  ∙ TSCA (Toxic Substances Control Act): Substance is not listed.
  ∙ Hazardous Air Pollutants Substance is not listed.
  ∙ Proposition 65
  ∙ Chemicals known to cause cancer: Substance is not listed.
  ∙ Chemicals known to cause reproductive toxicity for females: Substance is not listed.
  ∙ Chemicals known to cause reproductive toxicity for males: Substance is not listed.
  ∙ Chemicals known to cause developmental toxicity: Substance is not listed.

· Carcinogenic categories
  ∙ EPA (Environmental Protection Agency) Substance is not listed.
  ∙ TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
  ∙ NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.
· Contact: -
Trade name: Diminazene (aceturate)

- Date of preparation / last revision 11/08/2020 / -
- Abbreviations and acronyms:
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit