Section 1 - Product and Company Information

Product Name                       N-ACETYL-D-GLUCOSAMINE
Product Number                     A8625
Brand                              SIGMA
Company                            Sigma-Aldrich Canada, Ltd
Street Address                     2149 Winston Park Drive
City, State, Zip, Country          Oakville ON L6H 6J8 CA
Technical Phone:                   9058299500
Emergency Phone:                   800-424-9300
Fax:                               9058299292

Section 2 - Composition/Information on Ingredient

Substance Name                          CAS #                 SARA 313
N-ACETYL-D-GLUCOSAMINE                  7512-17-6             No

Formula         C8H15NO6

Section 3 - Hazards Identification

HMIS RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed.
Store at -20°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Wear dust mask.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Color: Very faintly beige</th>
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<tbody>
<tr>
<td></td>
<td>Form: Powder</td>
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</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
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</thead>
</table>
Molecular Weight        221.21 AMU
pH                      N/A
BP/BP Range             N/A
MP/MP Range             210 °C
Freezing Point          N/A
Vapor Pressure          N/A
Vapor Density           N/A
Saturated Vapor Conc.   N/A
SG/Density              N/A
Bulk Density            N/A
Odor Threshold          N/A
Volatile%               N/A
VOC Content             N/A
Water Content           N/A
Solvent Content         N/A
Evaporation Rate        N/A
Viscosity               N/A
Surface Tension         N/A
Partition Coefficient   N/A
Decomposition Temp.     N/A
Flash Point             N/A
Explosion Limits        N/A
Flammability            N/A
Autoignition Temp       N/A
Refractive Index        N/A
Optical Rotation        Degree of Rotation: 20 g/l Solvent: H2O
                        +50 - +42 (+/-3)
Miscellaneous Data      N/A
Solubility              Solvent: 0.1 g/ml H2O clear, colorless
N/A = not available

Section 10 - Stability and Reactivity

STABILITY
   Stable: Stable.
   Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
   Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION
   Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
   Skin Contact: May cause skin irritation.
   Skin Absorption: May be harmful if absorbed through the skin.
   Eye Contact: May cause eye irritation.
   Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
   Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE
   To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

No data available.
Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
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. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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