Section 1 - Product and Company Information

Product Name: Niacinamide USP
Product Number: N5535
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: Niacinamide USP
CAS #: 98-92-0
SARA 313: No

Formula: C6H6N2O
Synonyms: Acid amide * Amide PP * Amid kyseliny nikotinove (Czech) * Aminicotin * m-(Aminocarbonyl)pyridine * Amixicotyn * Amnicotin * Austrovit PP * Benicot * 3-Carbamoylpyridine * Delonin amide * Dipegyl * Endobion * Factor PP * Hansamid * Inovitan PP * NAM * Niacevit * Niacinamide * Niavit PP * Nicamindon * Nicasir * Nicobion * Nicofort * Nicogen * Nicomidol * Nicosan 2 * Nicotamide * Nicotilamide * Nicotinamide * Nicotinic acid amide * Nicotinylamide * Nicotinsaureamid (German) * Nicotylamide * Nicovit * Nicovitol * Nicozymin * Niko-Tamin * Nikotinsaureamid (German) * Nicocinamide * Niozymin * Pelmine * Pelsonin amide * PP-Faktor * Pyridine-3-carboxylic acid amide * 3-Pyridinecarboxamide * 3-Pyridinecarboxylic acid amide * Savacotyl * VI-Nicotyl * Vitamin B * Vitamin B3 * Vitamin PP * Witamina PP

RTECS Number: QS3675000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Irritant.
Irritating to eyes, respiratory system and skin.
Target organ(s): Eyes. Kidneys.

HMIS RATING
HEALTH: 2*
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
**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 not breathing give artificial respiration. If breathing is difficult, give oxygen.

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

**EYE EXPOSURE**
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

**Section 5 - Fire Fighting Measures**

**FLASH POINT**
302 °F  150 °C  Method: closed cup

**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)**
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**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: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**STORAGE**
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

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

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Government approved respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Physical State: Solid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Color: White</td>
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<tr>
<td></td>
<td>Form: Fine crystals</td>
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</tr>
<tr>
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<tr>
<td>pH</td>
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<td>MP/MP Range</td>
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<td>Freezing Point</td>
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<td>Vapor Pressure</td>
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<td>Saturated Vapor Conc.</td>
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<td>Solvent Content</td>
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<td>Viscosity</td>
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<td>Flash Point</td>
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<td>Explosion Limits</td>
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<td>N/A = not available</td>
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</table>

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

TARGET ORGAN(S) OR SYSTEM(S)

SIGNS AND SYMPTOMS OF EXPOSURE
Other symptoms of exposure can include anorexia, excessive salivation, pupillary constriction, bronchoconstriction, respiratory failure, tightness of the chest, coma, pulmonary, ureter, and bladder effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CONDITIONS AGGRAVATED BY EXPOSURE
May produce reversible liver damage

TOXICITY DATA

Oral Oral
Rat Rat
3500 mg/kg 3500 mg/kg
LD50 LD50

Subcutaneous Subcutaneous
Rat Rat
1680 MG/KG 1680 MG/KG
LD50 LD50
Remarks: Lungs, Thorax, or Respiration: Other changes. Lungs, Thorax, or Respiration: Other changes.

Oral Oral
Mouse Mouse
2500 mg/kg 2500 mg/kg
LD50 LD50

Intraperitoneal Intraperitoneal
Mouse Mouse
2050 MG/KG 2050 MG/KG
LD50 LD50

Subcutaneous Subcutaneous
Mouse Mouse
2 GM/KG 2 GM/KG
LD50 LD50

CHRONIC EXPOSURE - MUTAGEN
Species: Human Human
Dose: 10 MMOL/L 10 MMOL/L
Cell Type: lymphocyte lymphocyte
Mutation test: Sister chromatid exchange Sister chromatid exchange
Species: Rat Rat
Dose: 20 MMOL/L 20 MMOL/L
Cell Type: liver liver
Mutation test: DNA inhibition DNA inhibition
Species: Rat Rat
Dose: 25 MG/KG 25 MG/KG
Cell Type: ovary ovary
Mutation test: Body fluid assay Body fluid assay
Species: Hamster Hamster
Dose: 5 MMOL/L 5 MMOL/L
Cell Type: ovary ovary
Mutation test: Sister chromatid exchange Sister chromatid exchange

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
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

EU ADDITIONAL CLASSIFICATION
Symbol of Danger: Xi
Indication of Danger: Irritant.
R: 36/37/38
Risk Statements: Irritating to eyes, respiratory system and skin.
S: 26 36
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

US CLASSIFICATION AND LABEL TEXT
Indication of Danger: Irritant.
Risk Statements: Irritating to eyes, respiratory system and skin.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.
US Statements: Target organ(s): Eyes. Kidneys.
UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes Yes

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 or manufacturing use. Not for prescription compound or other uses.