Material Safety Data Sheet
acc. to OSHA and ANSI

1 Identification of substance:
Product details:
Product name: 3-Aminopyrazine-2-carboxylic acid

2 Composition/Data on components:
Chemical characterization:
Description: (CAS#)
3-Aminopyrazine-2-carboxylic acid (CAS# 5424-01-1): 100%
Identification number(s):
EINECS Number: 226-558-7

3 Hazards identification
Hazard description:
Xi Irritant

Information pertaining to particular dangers for man and environment
R 36/37/38 Irritating to eyes, respiratory system and skin.
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
HEALTH 1 Health (acute effects) = 1
Flammability = 1
FIRE 1
Reactivity = 1
REACTIVITY 1

4 First aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

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After swallowing Seek immediate medical advice.

5 Fire fighting measures
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Protective equipment:
Wear self-contained respirator.
Wear fully protective impervious suit.

6 Accidental release measures
Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Measures for environmental protection:
Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting: Ensure adequate ventilation.
Additional information:
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage
Handling
Information for safe handling:
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Information about protection against explosions and fires:
Keep ignition sources away.

Storage
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection
Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Components with limit values that require monitoring at the workplace:
Not required.

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Additional information: No data
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Breathing equipment:
Use suitable respirator when high concentrations are present.

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.

Material of gloves
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information
Form: Powder
Odor: Not determined
Change in condition
Melting point/Melting range: 204-206??C (399-403??F) (dec)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined
Flash point: Not applicable
Ignition temperature: Not determined
Decomposition temperature: Not determined
Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure: Not determined
Density: Not determined

Solubility in / Miscibility with
Water: Not determined

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.

Materials to be avoided: Oxidizing agents

Dangerous reactions No dangerous reactions known

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Dangerous products of decomposition:
Carbon monoxide and carbon dioxide
Nitrogen oxides

11 Toxicological information
Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity:
Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this
substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:
General notes:
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations
Product:
Recommendation
Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information
Not a hazardous material for transportation.
DOT regulations:
Hazard class: None
Land transport ADR/RID (cross-border)
ADR/RID class: None
Maritime transport IMDG:
IMDG Class: None
Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None

Transport/Additional information:
Not dangerous according to the above specifications.

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15 Regulations
Product related hazard informations:
Hazard symbols:
Xi Irritant
Risk phrases:
36/37/38 Irritating to eyes, respiratory system and skin.
Safety phrases:
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37 Wear suitable gloves.
National regulations
This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.
Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).
Information about limitation of use:
For use only by technically qualified individuals.