

5-Bromonicotinic acid

Safety Data Sheet 4H219Z3 according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 01/27/2016 Version: 1.0

| SECTION 1: Identification | |
|---|--|
| 1.1. Identification | |
| Product form | : Substance |
| Substance name | : 5-Bromonicotinic acid |
| CAS No | : 20826-04-4 |
| Product code | : 4H21-9-Z3 |
| Formula | : C6H4BrNO2 |
| Synonyms | : 5-Bromopyridine-3-carboxylic acid |
| Other means of identification | : MFCD00009783 |
| 1.2. Relevant identified uses of the su | bstance or mixture and uses advised against |
| Use of the substance/mixture | : Laboratory chemicals |
| | Manufacture of substances Scientific research and development |
| 1.3. Details of the supplier of the safe | ty data sheet |
| SynQuest Laboratories, Inc. | |
| P.O. Box 309 | |
| Alachua, FL 32615 - United States of America T (386) 462-0788 - F (386) 462-7097 | |
| info@synquestlabs.com - www.synquestlabs. | com |
| 1.4. Emergency telephone number | |
| Emergency number | : (844) 523-4086 (3E Company - Account 10069) |
| | |
| SECTION 2: Hazard(s) identification | on |
| 2.1. Classification of the substance of | r mixture |
| Classification (GHS-US) | |
| Skin Irrit. 2 H315 - Causes skin irritation | |
| Eye Irrit. 2A H319 - Causes serious eye irr | |
| STOT SE 3 H335 - May cause respiratory | irritation |
| Full text of H-phrases: see section 16 | |
| 2.2. Label elements | |
| GHS-US labeling | |
| Hazard pictograms (GHS-US) | |
| hazaru pictograms (0110-00) | |
| | |
| | • |
| | |
| | GHS07 |
| Signal word (GHS-US) | : Warning |
| Hazard statements (GHS-US) | : H315 - Causes skin irritation |
| | H319 - Causes serious eye irritation H335 - May cause respiratory irritation |
| Precautionary statements (GHS-US) | : P261 - Avoid breathing dust, mist, spray |
| Frecautionary statements (GHS-03) | P264 - Wash skin thoroughly after handling |
| | P271 - Use only outdoors or in a well-ventilated area |
| | P280 - Wear protective gloves/protective clothing/eye protection/face protection |
| | P302+P352 - If on skin: Wash with plenty of soap and water P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing |
| | P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact |
| | lenses, if present and easy to do. Continue rinsing |
| | P312 - Call a POISON CENTER or doctor/physician if you feel unwell |
| | P321 - Specific treatment (see supplemental first aid instructions on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention |
| | P337+P313 - If eye irritation persists: Get medical advice/attention |
| | P362+P364 - Take off contaminated clothing and wash it before reuse |
| | P403+P233 - Store in a well-ventilated place. Keep container tightly closed |
| | |
| | P405 - Store locked up P501 - Dispose of contents/container to an approved waste disposal plant |

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| | Other hazards | | | | |
|---|--|--|---|--|---|
| lo additi | onal information available | | | | |
| .4. | Unknown acute toxicity (GHS US) | | | | |
| lot appli | cable | | | | |
| ECTI | ON 3: Composition/informatio | n on in | gredients | | |
| .1. | Substance | | | | |
| Substand | ce type | : Mono | o-constituent | | |
| Name | | | Product identifier | % | Classification (GHS-US) |
| 5-Bromo (Main con | nicotinic acid Istituent) | | (CAS No) 20826-04-4 | <= 100 | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |
| ull text | of H-phrases: see section 16 | | | | |
| .2. | Mixture | | | | |
| lot appli | cable | | | | |
| ECTI | ON 4: First aid measures | | | | |
| .1. | Description of first aid measures | | | | |
| irst-aid | measures general | | se of accident or if you feel unwell, seek is possible). Move the affected personnel | | |
| irst-aid | measures after inhalation | | ove person to fresh air and keep comforta ration. Get medical advice/attention. | able for breathin | g. If not breathing, give artificial |
| irst-aid | measures after skin contact | : Wash | n with plenty of soap and water. Get med | cal advice/atten | tion. |
| irst-aid | measures after eye contact | prese | ediately flush eyes thoroughly with water tent and easy to do. Continue rinsing. Get | medical advice/ | attention. |
| irst-aid | measures after ingestion | : Do N mout | OT induce vomiting. Never give anything h out with water. Get medical advice/atte | by mouth to an ntion. | unconscious person. Rinse |
| .2. | Most important symptoms and effect | ts, both | acute and delayed | | |
| Symptoms/injuries : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11. | | | | | |
| | | | | | ed in the labelling (see section |
| .3. | Indication of any immediate medical | 2.2) a | and/or in section 11. | ects are describe | ed in the labelling (see section |
| | Indication of any immediate medical nptomatically. | 2.2) a | and/or in section 11. | | ed in the labelling (see section |
| reat syr | | 2.2) a | and/or in section 11. | | ed in the labelling (see section |
| reat syr | nptomatically. | 2.2) a | and/or in section 11. | | ed in the labelling (see section |
| reat syr SECTI .1. | nptomatically. ON 5: Firefighting measures | 2.2) a attentio | and/or in section 11. | | |
| ECTIO .1. Suitable | nptomatically. ON 5: Firefighting measures Extinguishing media | 2.2) a attentio | and/or in section 11. n and special treatment needed nol resistant foam. Carbon dioxide. Dry po opriate for surrounding fire. | | |
| ECTIC .1. uitable .2. | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul | 2.2) a attentio : Alcoh appro | and/or in section 11. n and special treatment needed nol resistant foam. Carbon dioxide. Dry po opriate for surrounding fire. | owder. Water sp | oray. Use extinguishing media |
| ECTIO .1. Suitable .2. | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul | 2.2) a attentio : Alcoh appro | and/or in section 11. n and special treatment needed nol resistant foam. Carbon dioxide. Dry po opriate for surrounding fire. or mixture | owder. Water sp | oray. Use extinguishing media |
| ECTIC .1. uitable .2. ire haza .3. | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul | 2.2) a attentio : Alcoh appro ostance : Therr | and/or in section 11. n and special treatment needed nol resistant foam. Carbon dioxide. Dry po opriate for surrounding fire. or mixture | owder. Water sp | oray. Use extinguishing media |
| 5.1. Suitable 5.2. Fire haza | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul ard Advice for firefighters | 2.2) a attentio : Alcoh appro ostance (: Therr : In cas : Wear | and/or in section 11. In and special treatment needed nol resistant foam. Carbon dioxide. Dry po opriate for surrounding fire. or mixture mal decomposition generates: Carbon ox | owder. Water sp ides. Hydrogen n combination w | oray. Use extinguishing media bromide. Nitrogen oxides. |
| reat syr ECTIC .1. suitable .2. ire haza .3. irefighti Protectio | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul ard Advice for firefighters ng instructions n during firefighting ON 6: Accidental release meas | 2.2) a attentio : Alcoh appro ostance o : Therr : In cas : Wear appa | and/or in section 11. In and special treatment needed nol resistant foam. Carbon dioxide. Dry per opriate for surrounding fire. or mixture mal decomposition generates: Carbon ox se of fire: Evacuate area. gas tight chemically protective clothing i ratus. For further information refer to sec | owder. Water sp ides. Hydrogen n combination w | oray. Use extinguishing media bromide. Nitrogen oxides. |
| ECTION 2. ire haze 3. irefighti rotectio ECTION 1. | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul ard Advice for firefighters ng instructions n during firefighting ON 6: Accidental release meas Personal precautions, protective equilibrium | 2.2) a attentio : Alcof appro ostance o : Therr : In cas : Wear appa sures uipment | and/or in section 11. In and special treatment needed nol resistant foam. Carbon dioxide. Dry po- poriate for surrounding fire. or mixture mal decomposition generates: Carbon ox se of fire: Evacuate area. gas tight chemically protective clothing i ratus. For further information refer to sec and emergency procedures | owder. Water sp ides. Hydrogen n combination w tion 8: "Exposur | bray. Use extinguishing media bromide. Nitrogen oxides. with self contained breathing e controls/personal protection". |
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| Freat syr SECTION Suitable S.2. Fire haza S.3. Firefighti Protectio SECTION SE | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul ard Advice for firefighters ng instructions n during firefighting ON 6: Accidental release meas Personal precautions, protective eq measures For non-emergency personnel | 2.2) a attentio : Alcof appro ostance o : Therr : In cas : Wear appa sures uipment : Evac | and/or in section 11. In and special treatment needed nol resistant foam. Carbon dioxide. Dry po- poriate for surrounding fire. or mixture mal decomposition generates: Carbon ox se of fire: Evacuate area. gas tight chemically protective clothing i ratus. For further information refer to sec and emergency procedures uate unnecessary personnel. Ensure ade | owder. Water sp ides. Hydrogen n combination w tion 8: "Exposur | bromide. Nitrogen oxides. with self contained breathing e controls/personal protection". |
| Creat syr Creat syr Creat syr Creating and the system Creating and | nptomatically. ON 5: Firefighting measures Extinguishing media extinguishing media Special hazards arising from the sul ard Advice for firefighters ng instructions n during firefighting ON 6: Accidental release meas Personal precautions, protective eq measures For non-emergency personnel acy procedures | 2.2) a attentio : Alcor appro : Therr : In cas : Wear appa sures uipment : Evac : Only : Do no | and/or in section 11. In and special treatment needed nol resistant foam. Carbon dioxide. Dry po- poriate for surrounding fire. or mixture mal decomposition generates: Carbon ox se of fire: Evacuate area. gas tight chemically protective clothing i ratus. For further information refer to sec and emergency procedures uate unnecessary personnel. Ensure ade | owder. Water sp ides. Hydrogen n combination w tion 8: "Exposur equate air ventila e protective equ protective equip | ation. Do not breathe dust. |

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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| e e , | |
|--|--|
| 6.3. Methods and material for containm | nent and cleaning up |
| For containment | : Stop leak if safe to do so. |
| Methods for cleaning up | : Sweep or shovel spills into appropriate container for disposal. Minimize generation of dust. |
| Other information | : For disposal of solid materials or residues refer to section 13 : "Disposal considerations". |
| 6.4. Reference to other sections | |
| No additional information available | |
| SECTION 7: Handling and storage | |
| 7.1. Precautions for safe handling | |
| Precautions for safe handling | Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Do not breathe dust, mist, spray. Wear personal protective equipment. Avoid contact with skin and eyes. |
| Hygiene measures | : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |
| 7.2. Conditions for safe storage, includ | ling any incompatibilities |
| Technical measures | : Comply with applicable regulations. |
| Storage conditions | : Keep container closed when not in use. Keep away from ignition sources. Keep contents under inert gas. |
| Incompatible materials | : Refer to Section 10 on Incompatible Materials. |
| Storage area | : Store in dry, cool, well-ventilated area. Light sensitive. |
| | |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

| 8.2. Exposure controls | |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. |
| Hand protection | : Protective gloves. 29 CFR 1910.138: Hand Protection. |
| Eye protection | : Chemical goggles or safety glasses. Face shield. 29 CFR 1910.133: Eye and Face Protection. |
| Skin and body protection | : Wear suitable protective clothing. |
| Respiratory protection | : In case of inadequate ventilation wear respiratory protection. 29 CFR 1910.134: Respiratory Protection. |
| Other information | : Safety shoes. 29 CFR 1910.136: Foot Protection. |
| | |

SECTION 9: Physical and chemical properties 9.1. Information on basic physical and chemical properties Physical state : Solid Color : No data available Odor : No data available Odor threshold No data available • : No data available pН : 178 - 180 °C Melting point Freezing point : No data available Boiling point : No data available Flash point : No data available : No data available Relative evaporation rate (butyl acetate=1) Flammability (solid, gas) : No data available Explosion limits : No data available Explosive properties : No data available Oxidizing properties : No data available : No data available Vapor pressure

Relative vapor density at 20 °C

Relative density

Molecular mass

: 202.01 g/mol

: No data available

: No data available

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| Solubility | : No data available |
|---------------------------|---------------------|
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |

9.2. **Other information**

No additional information available

| SECT | ION 10: Stability and reactivity |
|---------|---|
| 10.1. | Reactivity |
| No add | litional information available |
| 10.2. | Chemical stability |
| The pro | oduct is stable at normal handling and storage conditions. |
| 10.3. | Possibility of hazardous reactions |
| No add | litional information available |
| 10.4. | Conditions to avoid |
| Keep a | way from heat, sparks and flame. |
| 10.5. | Incompatible materials |
| Strong | oxidizing agents. Strong reducing agents. |
| 10.6. | Hazardous decomposition products |
| | normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous decomposition products in case of e Section 5. |
| SECT | ION 11: Toxicological information |
| 11.1. | Information on toxicological effects |
| | |

| Acute toxicity | : Not classified |
|-----------------------------------|----------------------------------|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |

| Reproductive toxicity | : Not classified |
|--|-------------------------------------|
| Specific target organ toxicity (single exposure) | : May cause respiratory irritation. |
| Specific target organ toxicity (repeated exposure) | : Not classified |

Aspiration hazard

: Not classified

| ional information available | | | |
|-------------------------------|---|--|---|
| Other adverse effects | | | |
| ional information available | | | |
| Mobility in soil | | | |
| ional information available | | | |
| Bioaccumulative potential | | | |
| ional information available | | | |
| Persistence and degradability | | | |
| ional information available | | | |
| Toxicity | | | |
| | Toxicity ional information available Persistence and degradability ional information available Bioaccumulative potential ional information available Mobility in soil ional information available Other adverse effects | ional information available Persistence and degradability ional information available Bioaccumulative potential ional information available Mobility in soil ional information available Other adverse effects | Toxicity ional information available Persistence and degradability ional information available Bioaccumulative potential ional information available Mobility in soil ional information available Other adverse effects |

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| SECTION 13: Disposal consideratio | ns | | |
|--|---|--|--|
| 13.1. Waste treatment methods | | | |
| Waste treatment methods | : Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber. | | |
| Waste disposal recommendations | : Dispose of contents/container in accordance with licensed collector's sorting instructions. | | |
| Additional information | : Recycle the material as far as possible. | | |
| | | | |
| SECTION 14: Transport information | | | |
| Department of Transportation (DOT) | | | |
| In accordance with DOT | | | |
| Not regulated for transport | | | |
| | | | |
| TDG | | | |
| No additional information available | | | |
| Transport by sea | | | |
| | No additional information available | | |
| | | | |
| Air transport | | | |
| No additional information available | | | |
| SECTION 15: Regulatory informatio | n | | |
| 15.1. US Federal regulations | | | |
| All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for: | | | |

| 5-Bromonicotinic acid CAS No 20826-04-4 100% | | | |
|--|--|--------------------|------|
| | | 000 100 20020-04-4 | 100% |

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

| 5-Bromonicotinic acid (20826-04-4) | |
|--|--|
| Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on NZIoC (New Zealand Inventory of Chemicals) | |

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
|---------------|---|
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

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| NFPA health hazard | : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given. |
|--------------------|---|
| NFPA fire hazard | : 0 - Materials that will not burn. |
| NFPA reactivity | : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water. |
| HMIS III Rating | |
| Health | : 2 Moderate Hazard - Temporary or minor injury may occur |
| Flammability | : 0 Minimal Hazard - Materials that will not burn |
| Physical | : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives. |

SDS US (GHS HazCom 2012)

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 offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable or any damage resulting from handling or from contact with the above product.