



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
HPR, Schedule 1

Revision date 20-Mar-2025

Revision Number 1

1. Identification

Product identifier

Product Name 5-Amino-1H-imidazole-4-carboxamide

Other means of identification

Product Code(s) MM1289.02-0025

Recommended use of the chemical and restrictions on use

Recommended use Laboratory use

Restrictions on use No information available

Details of the supplier of the safety data sheet

Initial supplier identifier

Toronto Research Chemicals
101 Milani Blvd.,
Vaughan, Ontario
L4H 4M4

Emergency number: +1(416) 665-9696 between 0800-1700 (GMT-5)

Fax: +14166654439

Web: www.lgcstandards.com

E-mail sds-request@lgcgroup.com

Emergency telephone number

Emergency Telephone

For Hazardous Materials or Dangerous Goods Incident

Spill, Leak, Fire Exposure, or Accident

Call CHEMTREC:

USA & Canada 1-800-424-9300

Rest of the world +1 703-741-3877

2. Hazard identification

Classification of the substance or mixture

Classification according to WHMIS.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity — single exposure	Category 3



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

Category 3 Target organ effects: Respiratory irritation.

Label elements



Warning

Hazard statements

Classification according to WHMIS.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.

Avoid breathing dust, fume, gas, mist, vapors and spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, eye protection and face protection.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice and attention.

Skin

IF ON SKIN: Wash with plenty of water and soap.

If skin irritation occurs: Get medical advice and attention.

Take off all contaminated clothing and wash it before reuse.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTRE or doctor if you feel unwell.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant.

Other information

No information available.



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

3. Composition/information on ingredients

Substance

Formula C₄H₆N₄O

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
5-Amino-1H-imidazole-4-carboxamide	360-97-4	90 - 100%	-	

4. First-aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

surrounding environment.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Other information

Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labelled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Ensure adequate ventilation. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment.



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Control parameters

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Wear suitable gloves. Impervious gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective nitrile rubber gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid
Physical state	Solid
Colour	white, to, off-white
Odour	No information available
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	170 - 172 °C	None known
Initial boiling point and boiling range	No data available	None known
Flammability		None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
SADT (°C)	No data available	None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	Slightly soluble	None known
Solubility(ies)	DMSO Methanol slightly soluble	
Partition Coefficient (n-octanol/water)	-1.1	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		None known
Particle Size	No data available	
Particle Size Distribution	No data available	

Other information

Molecular formula	C ₄ H ₆ N ₄ O
Molecular weight	126.12

Information with regards to physical hazard classes

10. Stability and reactivity

Reactivity	No information available.
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SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidising agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. May cause redness and tearing of the eyes.
Acute toxicity	No information available.
Numerical measures of toxicity	No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitisation	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability No information available.

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
5-Amino-1H-imidazole-4-carboxamide 360-97-4	-1.1

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

TDG Not regulated



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

DOT Not regulated
ICAO (air) Not regulated
IATA Not regulated
IMDG Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

TSCA LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

Chemical name	CAS No.	US TSCA Inventory listing	US TSCA inactive/active designation
5-Amino-1H-imidazole-4-carboxamide	360-97-4	Present	Inactive

International Inventories

DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.
TCSI	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

ACGIH	The American Conference of Governmental Industrial Hygienists (ACGIH) Documentation of Threshold Limit Values and Biological Indices (latest edition)
ADN	European Agreement on International Transport of Dangerous Goods by Road (ADR)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIC	Australian Inventory of Industrial Chemicals
P240 - Ground and bond container and receiving equipment	Acute Toxicity Estimate
P263 - Avoid contact during pregnancy and while nursing	ASTM (formerly known as the American Society for Testing and Materials)
bar	Biological Reference Values for Chemical Compounds in the Work Area
paste	Biological tolerance values for occupational exposure
MEX	Biological exposure limits
European Export/Import Restrictions per (EC) 649/2012 - Annex Number	Body weight
Ceiling	Maximum limit value
CMR Effects	CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
DOT	DOT (Department of Transportation)
DSL	Canadian Domestic Substances List (DSL)
EmS	Emergency Schedule
ENCS	ENCS (Existing and New Chemical Substances)
EPA	EPA (Environmental Protection Agency)
GHS	The Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
HMIS	Hazardous Materials Identification System
IARC	IARC - International Agency for Research on Cancer
IATA	(IATA) International Air Transport Association
IBCs	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

	in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)
IECSC	China (IECSC)
IMDG	Sea transport (IMDG)
Directive 84/449/EEC, Annex, C.10	International Maritime Organization
Directive 84/449/EEC, Annex, A.7	ISO (The International Organization for Standardisation)
KECL	South Korea (KECL)
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
Harmful Substances - names to be indicated on the label; Industrial Safety and Health Law enforcement order article 18 (related to Industrial Safety and Health Law article 57)	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	NOAEL (No observed adverse effect level)
Other names	No Observable Effect Loading Rate
NZIoC	NZIoC - New Zealand Inventory of Chemicals
Harmful Substances - names to be indicated on the label; Industrial Safety and Health Law enforcement order article 18 (related to Industrial Safety and Health Law article 57)	OECD (Organization for Economic Cooperation and Development)
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	PICCS - Philippines Inventory of Chemicals and Chemical Substances
Chemically unstable gas A	Persistent, Mobile and Toxic
Terrestrial ecotoxicity	Personal protective equipment
QSAR	Quantitative Structure Activity Relationships [QSAR]
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	STEL - Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
TCSI	Taiwan Chemical Substance Inventory
TDG	TDG (Transport of Dangerous Goods) Canada
TSCA	TSCA (Toxic Substances Control Act)
TWA	Time-Weighted Average



SAFETY DATA SHEET

MM1289.02-0025 -
5-Amino-1H-imidazole-4-carboxamide

Revision date 20-Mar-2025

UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
Sen+	Sensitiser
Sk*	Skin designation
**	Hazard Designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 20-Mar-2025

Revision Note No information available.

Disclaimer

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

End of Safety Data Sheet