

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006/EG,
Article 31



GENAXXON
b i o s c i e n c e

Product number: M6033

Product name: Imidazole

1. Identification of the substance/preparation and of the company

1.1. Product identifier

Product Name: Imidazole

Catalogue No.: M6033

CAS Number: 288-32-4

EC Number: 206-019-2

Index-Number: 613-319-00-0

REACH Registration Number: 01-2119485825-24-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against

Life cycle stages: PW Widespread use by professional workers

Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU24 Scientific research and development

Product category: PC21: Laboratory chemicals

Process category: PROC15: Use as laboratory reagent

Environmental release category

ERC4: Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC6a: Use of intermediate

Application of the substance / the mixture Laboratory chemicals

Not approved for human or animal diagnostic or therapeutic procedures.

Not for household use.

Not for consumption

1.3. Details of the supplier of the safety data sheet

Manufacturer /Supplier:

Genaxxon bioscience GmbH, Söflinger Str. 70, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123, Fax: +49 731 3608 962, info@genaxxon.com

Further information available from: General Management

Emergency telephone number: +49 (0)731 3608 123 (Monday till Friday: 7:30 – 18:30 o'clock)

NOTE: If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

Product Use:

This product is for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

2. Hazardous identification

2.1. Classification of the substance/preparation/mixture

Classification according to Regulation (EC) No 1272/2008

Skin Corrosion – Category 1C H314 Causes severe skin burns and eye damage.

Acute Toxicity (Oral) – Category 4 H302 Harmful if swallowed.

Reproductive Toxicity – Category 1B H360D May damage the unborn child.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS05

GHS07

GHS08

Signal word: Danger

Hazard-determining components of labelling:

Imidazole

Hazard statements

H302 Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H360D: May damage the unborn child.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

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P321 Specific treatment (see on this label).
P405 Store locked up.

2.3. Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

3. Composition/Information on ingredients

Chemical characterization: Substance

CAS No.	Index No.	EC No.:	Substance name	Weight % content (or range)	SCL/ M-factor/ ATE
288-32-4	613-319-00-0	206-019-2	L-Alanine; L- α -Aminopropionic acid	>99%	----

4. First Aid Measures

4.1. Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air, consult a doctor in case of complaints.

After skin contact:

Wash off with plenty of water.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

Seek medical treatment.

After swallowing:

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed: No further relevant information available.

4.3. Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5. Fire-fighting Measures

5.1. Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet.

5.2. Special hazards arising from the substance or mixture: Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

In case of fire, the following can be released:

Carbon oxides (CO, CO₂)

Hydrogen cyanide (HCN)

Nitrogen oxides (NO_x)

5.3. Advice for fire-fighters:

Protective equipment: Wear self-contained respiratory protective device.

No special measures necessary.

Additional information:

Contain escaping vapours with water.

Dispose off fire debris and contaminated fire fighting water in accordance with official regulations.

6. Accidental release Measures

6.1. Personal precautions, protective equipment and emergency procedure:

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

6.2. Environmental precautions: No special measures required.

6.3. Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Clean up affected area.

Dispose off the material collected in accordance to regulations.

6.4. Reference to other sections:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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7. Handling and storage

7.1. Precautions for safe handling:

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

No special measures required if used according to specifications.

Information about fire – and explosion protection: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Keep container tightly sealed.

Further information about storage conditions: Keep container tightly closed.

Recommended storage temperature: +15°C to +30°C°.

Storage class: 6.1 D

7.3. Specific end use(s):

No further relevant information available.

8. Exposure controls/personal protection

8.1. Control parameters

Components with limit values that require monitoring at the workplace:

DNELs		
Dermal	Long-term - systemic effects, worker	1.5 mg/kg
Inhalativ	Long-term - systemic effects, worker	10.6 mg/m3

PNECs	
Aquatic compartment – freshwater	0.13 mg/L
Aquatic compartment – marine water	0.013 mg/L
Aquatic compartment – water, intermittent releases	1.3 mg/L
Aquatic compartment – sediment in freshwater	0.336 mg/kg
Aquatic compartment – sediment in marine water	0.0336 mg/kg
Terrestrial compartment – soil	0.0425 mg/kg
Sewage treatment plant	10 mg/L

Additional information: The list valid during the making were used as basis.

Additional information about design of technical facilities: No further data; see item 7.

8.2. Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Change contaminated clothing.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Required when dusts are generated.

Filter P1 (EN 143).



Required when dusts are generated

Protection of hands:



Protective gloves (EN 374)

The glove material has to be impermeable and resist ant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies

from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

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The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for permeation: Level: >480 min.

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min.

Eye/face protection:



Safety glasses (EN 166)

Body protection:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information

Information on basic physical and chemical properties

General Information

Appearance

Form:	Solid
Colour:	Yellowish
Odour:	Amine-like
Odour threshold:	Not determined

pH value at 20°C (10g/L): 9 - 11

Change in conditions

Melting point/Melting range:	+88°C to +90°C
Boiling point/Boiling range:	+256°C

Flash point: +145°C

Flammability (solid, gaseous): Product is not flammable

Ignition temperature: +480°C

Decomposition temperature: Not determined

Self-ignition: Not determined

Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible

Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapour pressure: Not applicable

Density (20°C): Not applicable

Solubility in / Miscibility with
(water, 20°C): 600g/L

Partition coefficient (n-octanol/water): -0.02000118 (log value)

Viscosity:

Dynamic:	Not determined
Kinematic:	Not determined

Solvent content:

Organic solvents:	0.0%
VOC (EC)	0.00%

9.2 Other information

Appearance:

Form: Solid

Important information on protection of health and environment, and on safety.

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Explosive properties: Product does not present an explosion hazard.

Change in condition

Evaporation rate: Not applicable.

Information with regard to physical hazard classes

Explosives: Void
Flammable gases: Void
Aerosols: Void
Oxidising gases: Void
Gases under pressure: Void
Flammable liquids: Void
Flammable solids: Void
Self-reactive substances and mixtures: Void
Pyrophoric liquids: Void
Pyrophoric solids: Void
Self-heating substances and mixtures: Void
Substances and mixtures, which emit flammable gases in contact with water: Void
Oxidising liquids: Void
Oxidising solids: Void
Organic peroxides: Void
Corrosive to metals: Void
Desensitised explosives: Void

10. Stability and Reactivity

10.1. Reactivity: No dangerous reactions known.

10.2. Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions:

Violent reactions possible with:

strong oxidants
acid chlorides
acid anhydrides
acids

10.4. Conditions to avoid:

No further relevant information available.

10.5. Incompatible materials:

acid anhydrides
strong oxidants
acid chlorides

10.6. Hazardous decomposition products:

In the event of fire: See chapter 5 of this data sheet.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

Harmful if swallowed or if inhaled.

LD50/LC50 values relevant for classification

Component(s)	Type	Value	Species
288-32-4 Imidazole			
	Oral	LD50	970mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation: Causes severe skin burns and eye damage. ·

Serious eye damage/irritation: Causes severe skin burns and eye damage. ·

Respiratory or skin sensitization: Based on available data, the classification criteria are not met. ·

Germ cell mutagenicity: Based on available data, the classification criteria are not met. ·

Carcinogenicity: Based on available data, the classification criteria are not met. ·

Reproductive toxicity: May damage the unborn child. ·

STOT-single exposure: Based on available data, the classification criteria are not met. ·

STOT-repeated exposure: Based on available data, the classification criteria are not met. ·

Aspiration hazard: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available date, the classification criteria are not met.

11.2. Information on other hazards:

Endocrine disrupting properties Substance is not listed.

Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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Carcinogenic categories

IARC (International Agency for Research on Cancer): Substance is not listed.

NTP (National Toxicology Program): Substance is not listed.

The product should be treated with usual precautions while handling chemicals.

12. Ecological Information

12.1. Toxicity

Aquatic toxicity:

Type of test	Effective concentration	Method	Assessment
EC50/72 h	133mg/L (Aquatic plants)		
EC50/48 h	342mg/L (daphnia magna)		
LC50/48 h	280mg/L (fish)		

12.2. Persistence and degradability: No further relevant information available.

12.3. Bioaccumulative potential: No further relevant information available.

12.4. Mobility in soil: No further relevant information available.

12.5. Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.7. Other adverse effects: No further relevant information available.

Additional ecological information:

General notes: General notes:

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water. Danger to drinking water if even small quantities leak into the ground.

Do not allow undiluted product or larger quantities of it to reach ground water, water course or sewage system.

Do not allow to enter waters, waste water, or soil.

13. Disposal considerations

13.1. Waste treatment methods

Recommendation:

Chemicals must be disposed of in compliance with the respective national regulations. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Uncleaned/contaminated packaging:

Recommendation:

Disposal must be made according to official regulations.

Packaging that may not be cleansed are to be disposed off in the same manner as the product.

14. Transport information

14.1. UN-Number

ADR/RID, ADN, IMDG, IATA: UN3263

14.2. UN proper shipping name

ADR/RID, ADN, IMDG, IATA: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole)

14.3. Transport hazard class(es)

ADR



Class
Label

8 (C8)Corrosive substances
8

IMDG, IATA



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Class	8 Corrosive substances
Label	8
14.4. Packaging group	
ADR/RID, IMDG, IATA:	III
14.5. Environmental hazards:	
Marine pollutant:	Not applicable
14.6. Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	88
EMS Number:	F-A, S-B
Segregation groups:	Alkalies
Stowage Category:	A
Segregation Code:	SG35 Stow "separated from" SGG1-acids
14.7. Transport in bulk according to Annex II of IMO instruments	Not applicable
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30g Maximum net quantity per outer packaging: 1000g
Transport category	3
Tunnel restriction code	E
IMDG	
Limited quantities (LQ)	5kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30g Maximum net quantity per outer packaging: 1000g
UN "Model Regulation":	UN3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole), 8, III

15. Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I: Substance is not listed.

REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 30

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

REGULATION (EU) 2019/1148

Annex I: - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS: Substance is not listed.

Regulation (EC) No 273/2004 on drug precursors: Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors: Substance is not listed.

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57: Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

Further information

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. Genaxxon bioscience GmbH, 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.

Relevant phrases

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

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H360D: May damage the unborn child.

Disclaimer

This product is for R&D use only. Not for drug, household or other uses.

Abbreviations and Acronyms:

ACAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

Acute Tox. 4: Acute toxicity – Category 4

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

EINECS: European Inventory of Existing Commercial Chemical Substances

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

GHS: Globally Harmonized System of Classification and labeling of Chemicals

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

IMDG: International Maritime code for Dangerous Goods

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PNEC: Predicted No-Effect Concentration (REACH)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail).

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative