

**Safety data sheet**  
according to 1907/2006/EC, Article 31

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** Imidazole
- **Article number:** A3635
- **CAS Number:**  
288-32-4
- **EC number:**  
206-019-2
- **Index number:**  
613-319-00-0
- **Application of the substance / the mixture** Laboratory chemicals

- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt

Tel.: +49 (0)6151 93570  
Fax.: +49 (0)6151 935711  
msds@applichem.com

- **Further information obtainable from:** Dept. Compliance

- **1.4 Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Corr. 1C H314 Causes severe skin burns and eye damage.  
Repr. 1B H360D May damage the unborn child.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger

- **Hazard statements**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.

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H360D May damage the unborn child.

· **Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
- P321 Specific treatment (see on this label).
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.1 Substances**

- **CAS No. Description**  
288-32-4 Imidazole
- **Identification number(s)**
- **EC number:** 206-019-2
- **Index number:** 613-319-00-0

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

- **General information:**  
Personal protection for the First Aider.  
Seek medical treatment.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
Seek medical treatment.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **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.

### SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

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

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

- Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide and carbon dioxide  
Hydrogen cyanide (HCN)  
Combustible.

· **5.3 Advice for firefighters**

- **Protective equipment:** Wear self-contained respiratory protective device.

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- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Wear protective equipment. Keep unprotected persons away.  
Avoid substance contact.  
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid formation of dust.  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Clean up affected area.
- **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.

## \* SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Thorough dedusting.  
Open and handle receptacle with care.  
Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Provide alkali-resistant floor.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Open receptacle only under localised extractor facilities.  
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 6.1 C
- **7.3 Specific end use(s)** No further relevant information available.

## \* SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

### · DNELs

Dermal	Long-term - systemic effects, worker	1.5 mg/kg
Inhalative	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

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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 lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

- In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- Filter P3

· **Hand protection**



Protective gloves

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

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.

· **Penetration time of glove material**

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:  $\geq 0.11$  mm
- Value for the permeation: Level  $\geq 480$  min

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

- Nitrile rubber, NBR
- Recommended thickness of the material:  $\geq 0.11$  mm
- Value for the permeation: Level  $\geq 480$  min

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:**

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

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Solid

· **Colour:**

Yellow

· **Odour:**

Amine-like

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· Odour threshold:	Not determined.
· Melting point/freezing point:	88-90 °C
· Boiling point or initial boiling point and boiling range	256 °C
· Flammability	Product is not flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	145 °C
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· pH	9-11 (1%)
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 20 °C:	663 g/l
· Partition coefficient n-octanol/water (log value)	-0.02000118
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	1.03 g/cm <sup>3</sup>
· Relative density	Not determined.
· Bulk density:	600 kg/m <sup>3</sup>
· Vapour density	Not applicable.

· **9.2 Other information**

· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	480 °C
· 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

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## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **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** Heating.
- **10.5 Incompatible materials:**  
acid anhydrides  
strong oxidants  
acid chlorides
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**  
Harmful if swallowed.
- **LD/LC50 values relevant for classification:**

Components	Type	Value	Species
Oral	LD50	970 mg/kg	(rat)

- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes severe skin burns and eye damage.
- **Respiratory or skin sensitisation** 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.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**

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

- **12.2 Persistence and degradability** The product is easily biodegradable.
- **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.

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- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water  
Danger to drinking water if even small quantities leak into the ground.

### SECTION 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.
- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

### SECTION 14: Transport information

- |   |  |
|---|--|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, IMDG, IATA</b>  | UN3263   |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, IMDG, IATA</b>   | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.<br>(Imidazole)     |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR</b><br>           |  |
| · <b>Class</b><br>· <b>Label</b>  | 8 (C8) Corrosive substances.<br>8                          |
| · <b>IMDG, IATA</b><br>  |  |
| · <b>Class</b><br>· <b>Label</b>  | 8 Corrosive substances.<br>8                               |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>   | III  |
| · <b>14.5 Environmental hazards:</b>  | Not applicable.  |
| · <b>14.6 Special precautions for user</b><br>· <b>Hazard identification number (Kemler code):</b><br>· <b>EMS Number:</b><br>· <b>Segregation groups</b> | Warning: Corrosive substances.<br>88<br>F-A,S-B<br>Alkalis |

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· <b>Stowage Category</b>	A
· <b>Segregation Code</b>	SG35 Stow "separated from" SGG1-acids
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	5 kg
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5 kg
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>UN "Model Regulation":</b>	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (IMIDAZOLE), 8, III

## SECTION 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.
- **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 been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Dept. Compliance
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4

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Skin Corr. 1C: Skin corrosion/irritation – Category 1C  
Repr. 1B: Reproductive toxicity – Category 1B

- \* **Data compared to the previous version altered.**

## Annex: Exposure scenario

- **Short title of the exposure scenario** Use in laboratories
- **Description of the activities / processes covered in the Exposure Scenario**  
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Solid
- **Concentration of the substance in the mixture** Raw material.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting worker exposure**  
Avoid contact with eyes.  
Avoid contact with the skin.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**  
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**  
Ensure that suitable extractors are available on processing machines
- **Personal protective measures**  
Do not inhale dust / smoke / mist.  
Avoid contact with the skin.  
Avoid contact with the eyes.  
Pregnant women should strictly avoid inhalation or skin contact.  
Tightly sealed goggles  
Protective gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water**  
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Worker (dermal)**  
The calculated value is smaller than the DNEL.  
The exposure estimation was carried out in accordance with ECETOC TRA.
- **Worker (inhalation)**  
The calculated value is smaller than the DNEL.  
The exposure estimation was carried out in accordance with ECETOC TRA.
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.