

IMIDAZOLE

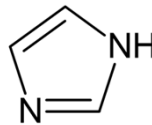
Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 8/30/2018 Revision date: 9/8/2020 Supersedes: 7/15/2019 Version: 3.0

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

1.1. Product identifier

Product form : Substance
Substance name : IMIDAZOLE
Chemical name : imidazole
IUPAC name : 1,3-Diazole
EC Index-No. : 613-319-00-0
EC-No. : 206-019-2
CAS-No. : 288-32-4
Product code : 21611083
Formula : C3H4N2
Chemical structure :



Synonyms : 1,3-Diaza-2,4-cyclopentadiene / Glyoxaline

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Scafell Organics
Molekula Ltd
Lingfield Way
Darlington - England
T +44 (0) 3302 000 333
info@molekula.com / kevinbanks@molekula.com - www.molekula.com

1.4. Emergency telephone number

Emergency number : +44 (0) 7769276927

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Reproductive toxicity, Category 1B H360D
Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 1C H314
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

GHS07

GHS05

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H360D - May damage the unborn child.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP) : P263 - Avoid contact during pregnancy/while nursing.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
IMIDAZOLE	(CAS-No.) 288-32-4 (EC-No.) 206-019-2 (EC Index-No.) 613-319-00-0	100

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Allow the victim to rest. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : May cause respiratory irritation. May cause shortness of breath, tightness of the chest, a sore throat and cough. Vomiting.

Symptoms/effects after skin contact : irritation (itching, redness, blistering). Causes severe burns.

Symptoms/effects after eye contact : redness, itching, tears. Risk of serious damage to eyes. May cause severe chemical burns to skin and cornea.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Ingestion may cause nausea, vomiting and diarrhea. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Get immediate medical advice/attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Nitrogen oxides.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: seal off low-lying areas. Keep container tightly closed and away from heat, sparks and flame.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Use extinguishing agent suitable for surrounding fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Warn all persons of toxic hazard.

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk. No flames, no sparks. Eliminate all sources of ignition. Avoid dust formation.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Avoid contact with skin, eyes and clothing. Do not breathe dust. Do not touch or walk on the spilled product.
Measures in case of dust release : Keep upwind. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc).

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Use personal protective equipment as required.
Emergency procedures : Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide local exhaust or general room ventilation. Avoid creating or spreading dust.
Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Closed system, ventilation. Comply with applicable regulations.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Incompatible products : Acid anhydrides. Acids. Strong oxidisers.
Incompatible materials : Heat sources. Sources of ignition. Direct sunlight.
Storage area : Store at ambient temperature.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

IMIDAZOLE (288-32-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	10.6 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	< 130 µg/L
PNEC aqua (marine water)	13 µg/L
PNEC aqua (intermittent, freshwater)	1.3 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	336 µg/kg dw
PNEC sediment (marine water)	33.6 µg/kg dw
PNEC (Soil)	
PNEC soil	42.5 µg/kg dw
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.2. Exposure controls

Appropriate engineering controls:

Ensure that there is a suitable ventilation system. Ensure exposure is below occupational exposure limits (where available).

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:					
The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR)	6 (> 480 minutes)	0.11mm minimum		EN 374
Eye protection:					
Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against powders and dusts.					
Type	Use	Characteristics	Standard		
Face shield, Safety glasses	Dust	With side shields	EN 166		
Skin and body protection:					
Wear suitable protective clothing					
Type	Standard				
Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product	EN ISO 13982				
Respiratory protection:					
Keep self contained breathing apparatus readily available for emergency use. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended					
Device	Filter type	Condition	Standard		
Respiratory protective device with a particle filter	Type P3	Dust protection	EN 14387		

Consumer exposure controls:

Avoid contact during pregnancy/while nursing.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 68.08 g/mol
Colour	: White to off white.
Odour	: Amine like.
Odour threshold	: No data available
pH	: 9 - 11 at 100g/l at 23.C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 88 - 91 °C lit
Freezing point	: No data available
Boiling point	: 256 °C lit
Flash point	: 145 °C Closed cup
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: 0.003 hPa at 20.C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.03 g/cm3 at 20.C
Solubility	: soluble in most organic solvents. soluble in water. Water: 633 g/l at 20.C

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Bulk density	: 550 kg/m ³
--------------	-------------------------

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Direct sunlight.

10.5. Incompatible materials

Acids. Acid anhydrides. Strong oxidizers.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates :

Carbon oxides (CO, CO₂). Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

IMIDAZOLE (288-32-4)	
LD50 oral rat	220 mg/kg
LD50 oral	880 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 9 - 11 at 100g/l at 23.C
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 9 - 11 at 100g/l at 23.C
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: May damage the unborn child.
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Do not empty into the drains.
Hazardous to the aquatic environment, short-term (acute)	: Not classified

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazardous to the aquatic environment, long-term (chronic) : Not classified

IMIDAZOLE (288-32-4)	
LC50 fish 1	280 mg/l 48h - Leuciscus idus (Golden orfe)
EC50 Daphnia 1	341.5 mg/l 48h - Daphnia (water flea)
EC50 72h algae (1)	133 mg/l 72h - Scenedesmus quadricauda (Green algae)

12.2. Persistence and degradability

IMIDAZOLE (288-32-4)	
Persistence and degradability	Readily biodegradable.
Biodegradation	86 % aerobic - Exposure time 19days

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

IMIDAZOLE (288-32-4)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations






13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3263	3263	3263	3263	3263
14.2. UN proper shipping name				
CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	Corrosive solid, basic, organic, n.o.s.	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
Transport document description				
UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole), 8, II, (E)	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole), 8, II	UN 3263 Corrosive solid, basic, organic, n.o.s. (Imidazole), 8, II	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole), 8, II	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (Imidazole), 8, II
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C8
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN, L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X

Transport by sea

Special provisions (IMDG)	: 274
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: B
Segregation (IMDG)	: SG35
Properties and observations (IMDG)	: Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y844
PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 859
PCA max net quantity (IATA)	: 15kg
CAO packing instructions (IATA)	: 863
CAO max net quantity (IATA)	: 50kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C8
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C8
Special provisions (RID)	: 274
Excepted quantities (RID)	: E2

IMIDAZOLE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN, L4BN
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 80

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

IMIDAZOLE is not on the REACH Candidate List

IMIDAZOLE is not on the REACH Annex XIV List

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H360D	May damage the unborn child.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.