

SAFETY DATA SHEET

Creation Date 04-February-2010

Revision Date 26-January-2018

Revision Number 4

1. Identification

Product Name Imidazole

Cat No. : AC122020000; AC122020020; AC122020050; AC122020100;
AC122021000; AC122025000

CAS-No 288-32-4
Synonyms Glyoxaline

Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Importer/Distributor
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Acute oral toxicity	Category 4
Skin Corrosion/irritation	Category 1 C
Serious Eye Damage/Eye Irritation	Category 1
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Combustible Dusts	Category 1

Label Elements

Signal Word

Danger

Hazard Statements

May form combustible dust concentrations in air
Harmful if swallowed

Causes severe skin burns and eye damage
 May cause respiratory irritation
 May damage the unborn child



Precautionary Statements

Prevention

Keep container tightly closed
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fumes/gas/mist/vapours/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Wear protective gloves/protective clothing/eye protection/face protection

Response

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER/doctor
 Rinse mouth
 Do NOT induce vomiting
 Wash contaminated clothing before reuse

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
1-Imidazole	288-32-4	>95

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray. alcohol-resistant foam. Dry chemical, soda ash, lime or sand.
Unsuitable Extinguishing Media	Carbon dioxide (CO ₂)
Flash Point	145 °C / 293 °F
Method -	No information available
Autoignition Temperature	480 °C / 896 °F
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Corrosive Material. Fine dust dispersed in air may ignite. Dust can form an explosive mixture in air. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO₂) Nitrogen oxides (NO_x) Hydrogen cyanide (hydrocyanic acid) Ammonia

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 3	Flammability 1	Instability 0	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling	Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest. Avoid dust formation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment**Eye Protection**

Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

Physical State	Solid
Appearance	White - Yellow
Odor	amine-like
Odor Threshold	No information available
pH	10.5 (6.7% aq.sol.)
Melting Point/Range	86 - 90 °C / 186.8 - 194 °F
Boiling Point/Range	255 - 256 °C / 491 - 492.8 °F @ 760 mmHg
Flash Point	145 °C / 293 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	0.003 mbar @ 20 °C
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available

Autoignition Temperature	480 °C / 896 °F
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C3 H4 N2
Molecular Weight	68.08

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Exposure to air or moisture over prolonged periods.
Incompatible Materials	Strong oxidizing agents, Acids, Acid chlorides, Acid anhydrides
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Nitrogen oxides (NO _x), Hydrogen cyanide (hydrocyanic acid), Ammonia
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
1-Imidazole	970 mg/kg (Rat)	-	-

Toxicologically Synergistic Products No information available

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

Irritation	Causes burns by all exposure routes
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
1-Imidazole	288-32-4	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects Not mutagenic in AMES Test

Reproductive Effects May cause harm to the unborn child.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available

Other Adverse Effects See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
1-Imidazole	EC50: = 82 mg/L, 96h (Desmodesmus subspicatus) EC50: = 130 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 280 mg/L, 48h static (Leuciscus idus)	= 1200 mg/L EC50 Pseudomonas putida 17 h = 231 mg/L EC50 Photobacterium phosphoreum 30 min	EC50: = 341.5 mg/L, 48h (Daphnia magna)

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
1-Imidazole	-0.02

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN3263
 Proper Shipping Name CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
 Proper technical name 1-Imidazole
 Hazard Class 8
 Packing Group III

TDG

UN-No UN3263
 Proper Shipping Name CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
 Hazard Class 8
 Packing Group III

IATA

UN-No UN3263
 Proper Shipping Name CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
 Hazard Class 8
 Packing Group III

IMDG/IMO

UN-No UN3263
 Proper Shipping Name CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
 Hazard Class 8
 Packing Group III

15. Regulatory information

International Inventories

Component	DSL	NDSL	TSCA	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL

1-Imidazole	X	-	X	206-019-2	-		X	X	X	X	X
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Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date	04-February-2010
Revision Date	26-January-2018
Print Date	26-January-2018
Revision Summary	This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS