

# Safety Data Sheet

## Lugalvan® IMZ

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(30042728/SDS\_GEN\_CA/EN)

### 1. Identification

#### Product identifier used on the label

**Lugalvan® IMZ**

#### Recommended use of the chemical and restriction on use

Recommended use\*: chemical for industrial metal-working

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

BASF Canada Inc.  
5025 Creekbank Road  
Building A, Floor 2  
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

#### Emergency telephone number

CHEMTREC: 1-800-424-9300  
BASF HOTLINE: (800) 454-COPE (2673)

#### Other means of identification

Molecular formula: C(3)H(4)N(2)  
Synonyms: 1H-Imidazole  
Glyoxalin

### 2. Hazards Identification

#### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

#### Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	1C	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Repr.	1B (unborn child)	Reproductive toxicity
Carc.	2	Carcinogenicity

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Repr.

2 (fertility)

Reproductive toxicity

### Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H302	Harmful if swallowed.
H351	Suspected of causing cancer.
H360	May damage the unborn child. Suspected of damaging fertility.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P201	Obtain special instructions before use.
P260	Do not breathe dust or mist.
P202	Do not handle until all safety precautions have been read and understood.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

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 or doctor/physician.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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### Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

## 3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
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693-98-1	>= 0.01 - <= 0.3%	2-methylimidazole
822-36-6	>= 0.01 - <= 0.3%	4-methylimidazole
288-32-4	>= 99.5 - < 100.0%	imidazole

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### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

##### If inhaled:

Keep patient calm, remove to fresh air. Assist in breathing if necessary. Seek medical attention.

##### If on skin:

Wash affected areas thoroughly with soap and water. Remove contaminated clothing. If irritation develops, seek medical attention.

##### If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

##### If swallowed:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Immediate medical attention required.

#### Most important symptoms and effects, both acute and delayed

Symptoms: Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

#### Indication of any immediate medical attention and special treatment needed

##### Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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### 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

#### Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon oxides, nitrogen oxides

The substances/groups of substances mentioned can be released in case of fire.

#### Advice for fire-fighters

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Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

### Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with the skin, eyes and clothing.

### Environmental precautions

Discharge into the environment must be avoided.

### Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Pick up with suitable appliance and dispose of.

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## 7. Handling and Storage

### Precautions for safe handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

Dust can form an explosive mixture with air.

### Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

Suitable materials for containers: Low density polyethylene (LDPE), glass, High density polyethylene (HDPE), Stove-lacquer RDL 16

Unsuitable materials for containers: Aluminium, Galvanized carbon steel (Zinc), Lead-plated, Paper/Fibreboard, Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Storage stability:

Storage duration: 24 Months

From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

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## 8. Exposure Controls/Personal Protection

No occupational exposure limits known.

### Personal protective equipment

#### Respiratory protection:

Breathing protection if dusts are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

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### Hand protection:

Chemical resistant protective gloves

### Eye protection:

Tightly fitting safety goggles (chemical goggles) and face shield.

### Body protection:

chemical protection overall (f.e. according to EN 13982) if dust is formed.

### General safety and hygiene measures:

Avoid inhalation of dust. Wash soiled clothing immediately.

## 9. Physical and Chemical Properties

Form:	powder, crystalline	
Odour:	amine-like	
Odour threshold:	not determined	
Colour:	colourless to yellowish	
pH value:	10.5	
Melting point:	88 - 90 °C	(DIN EN ISO 3146)
Boiling point:	256 °C	
Flash point:	> 135 °C	(DIN EN 22719; ISO 2719)
Flammability:	Vapours are flammable. not flammable	(Directive 92/69/EEC, A.10)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Autoignition:	480 °C	(DIN 51794)
SADT:	Not a substance/mixture liable to self-decomposition according to GHS.	
Vapour pressure:	0.003 mbar ( 20 °C)	
Density:	1,233 g/cm3 ( 20 °C)	(OECD Guideline 109)
Bulk density:	500 - 700 kg/m3	(ISO 697)
Partitioning coefficient n-octanol/water (log Pow):	-0.02 ( 25 °C)	
	-0.02 ( 25 °C)	(OECD Guideline 107)
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting. not self-igniting The value has not be determined because of the low risk of self-ignition in consequence of the low melting point.	
Thermal decomposition:	Stable up to boiling point.	
Viscosity, dynamic:	2.696 mPa.s ( 100 °C)	
	Literature data.	
Viscosity, kinematic:	not applicable, the product is a solid	
Particle size:		(134001)
	D10 179 µm	(134001)
	D50 959 µm	(134001)

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Solubility in water:	D90 1560 µm 663 g/l ( 20 °C)	(134001)
Molar mass:	68.08 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

## 10. Stability and Reactivity

### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Minimum ignition energy:

10 - 20 mJ, Grain size distribution: 7 - 100 µm

70 - 140 mJ, Grain size distribution: 3 - 200 µm

Formation of Remarks:

flammable gases:

Forms no flammable gases in the  
presence of water.

### Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions

Reacts with strong acids. Exothermic reaction. Dust explosion hazard.

### Conditions to avoid

See MSDS section 7 - Handling and storage.

### Incompatible materials

acids, acid forming substances

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

Stable up to boiling point.

## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion.

#### Oral

Type of value: LD50

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Species: rat

Value: approx. 970 mg/kg (BASF-Test)

### Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

### Irritation / corrosion

Assessment of irritating effects: Corrosive! Damages skin and eyes.

### Skin

Species: rabbit

Result: Corrosive.

Method: BASF-Test

### Eye

Species: rabbit

Result: Risk of serious damage to eyes.

Method: Draize test

### Sensitization

Assessment of sensitization: No data available. Study scientifically not justified.

### Aspiration Hazard

not applicable

## Chronic Toxicity/Effects

### Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies. The substance may cause damage to the kidney after repeated ingestion of high doses, as shown in animal studies.

### Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in a test with mammals.

### Carcinogenicity

Assessment of carcinogenicity: Contains a suspect carcinogen.

#### *Information on: 4-methylimidazole*

*Assessment of carcinogenicity: In long term studies in mice in which the substance was given by feed, a carcinogenic effect was observed. IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).*

#### *Information on: 2-methylimidazole*

*Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was observed. Due to the species specific mode of action, the effects are not expected to occur in humans. IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).*

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### Reproductive toxicity

Assessment of reproduction toxicity: Contains a suspected reproductive toxin.

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*Information on: 2-methylimidazole*

*Assessment of reproduction toxicity: The potential to impair fertility cannot be excluded when given at high doses. The results were determined in a Screening test.*

### Teratogenicity

Assessment of teratogenicity: The substance caused malformations/developmental toxicity in laboratory animals.

### Symptoms of Exposure

Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

#### Toxicity to fish

LC50 (48 h) approx. 280 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration.

#### Aquatic invertebrates

EC50 (48 h) 342 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The details of the toxic effect relate to the nominal concentration.

#### Aquatic plants

EC50 (72 h) 133 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

Nominal concentration.

#### Chronic toxicity to fish

Study scientifically not justified.

#### Chronic toxicity to aquatic invertebrates

Study scientifically not justified.

#### Assessment of terrestrial toxicity

Study scientifically not justified.

### Microorganisms/Effect on activated sludge

#### Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge, domestic/EC20 (0.5 h): approx. 45 mg/l

The details of the toxic effect relate to the nominal concentration.

DIN 38412 Part 8 bacterium/EC50 (17 h): 1,175 mg/l

The details of the toxic effect relate to the nominal concentration.

### Persistence and degradability



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### Assessment biodegradation and elimination (H<sub>2</sub>O)

Readily biodegradable (according to OECD criteria).

### Elimination information

90 - 100 % DOC reduction (18 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

> 97 % C-14 labelling (10 d) (OECD Guideline 307) (aerobic, soil)

### Information on Stability in Water (Hydrolysis)

t<sub>1/2</sub> > 96 h (20 °C, pH value 4), (other, pH 4)

t<sub>1/2</sub> > 96 h (20 °C, pH value 7), (other, pH 7)

t<sub>1/2</sub> > 96 h (22 °C, pH value 11), (other)

## **Bioaccumulative potential**

### Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

The data refer to the uncharged form of the substance.

### Bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected. The data refer to the uncharged form of the substance.

## **Mobility in soil**

### Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

The data refer to the uncharged form of the substance.

Adsorption to solid soil phase is not expected.

## **Additional information**

Adsorbable organically-bound halogen (AOX):

This product contains no organically-bound halogen.

Other ecotoxicological advice:

Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Do not release untreated into natural waters.

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## **13. Disposal considerations**

### **Waste disposal of substance:**

Incinerate in suitable incineration plant, observing local authority regulations. A waste code in accordance with the European waste catalog (EWC) cannot be specified, due to dependence on the usage. The waste code in accordance with the European waste catalog (EWC) must be specified in cooperation with disposal agency/manufacturer/authorities.

### **Container disposal:**

Packs that cannot be cleaned should be disposed of in the same manner as the contents. Uncontaminated packaging can be re-used.

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### 14. Transport Information

#### Land transport

TDG

Hazard class: 8  
Packing group: III  
ID number: UN 3263  
Hazard label: 8  
Proper shipping name: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (contains IMIDAZOLE)

#### Sea transport

IMDG

Hazard class: 8  
Packing group: III  
ID number: UN 3263  
Hazard label: 8  
Marine pollutant: NO  
Proper shipping name: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (contains IMIDAZOLE)

#### Air transport

IATA/ICAO

Hazard class: 8  
Packing group: III  
ID number: UN 3263  
Hazard label: 8  
Proper shipping name: CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (contains IMIDAZOLE)

### 15. Regulatory Information

#### Federal Regulations

##### Registration status:

Chemical DSL, CA released / listed

##### NFPA Hazard codes:

Health: 3 Fire: 1 Reactivity: 0 Special:

#### Assessment of the hazard classes according to UN GHS criteria (most recent version):

Skin Corr./Irrit.	1C	Skin corrosion/irritation
Acute Tox.	4 (oral)	Acute toxicity
Repr.	1B (unborn child)	Reproductive toxicity
Eye Dam./Irrit.	1	Serious eye damage/eye irritation

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### 16. Other Information

**SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2019/08/29

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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