according to the Globally Harmonized System



## **Imidocarb Formulation**

Version **Revision Date:** Date of last issue: 30.09.2023 SDS Number: 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name Imidocarb Formulation

Manufacturer or supplier's details

Company : MSD

Address Briahnager - Off Pune Nagar Road

Wagholi - Pune - India 412 207

: +1-908-740-4000 Telephone

Emergency telephone number: +1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Veterinary product Recommended use Restrictions on use Not applicable

### 2. HAZARDS IDENTIFICATION

## Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

#### Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

**GHS Classification** 

Reproductive toxicity : Category 2

single exposure (Oral)

Specific target organ toxicity - : Category 2 (Central nervous system)

repeated exposure (Oral)

Specific target organ toxicity - : Category 2 (Liver, Kidney)

## **GHS** label elements

Hazard pictograms

Signal word Warning

Hazard statements H361d Suspected of damaging the unborn child.

H371 May cause damage to organs (Central nervous system) if

swallowed.

H373 May cause damage to organs (Liver, Kidney) through

according to the Globally Harmonized System



## **Imidocarb Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

prolonged or repeated exposure if swallowed.

Precautionary statements : Prevention:

P203 Obtain, read and follow all safety instructions before use.

P260 Do not breathe mist or vapours.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P308 + P316 IF exposed or concerned: Get emergency medi-

cal help immediately.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards which do not result in classification

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

## Components

Chemical name	CAS-No. Concentration (	
		w/w)
imidocarb	27885-92-3	>= 5 - < 10

#### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms : Suspected of damaging the unborn child.

according to the Globally Harmonized System



## **Imidocarb Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 28.09.2024
 7677564-00010
 Date of first issue: 15.12.2020

and effects, both acute and

delayed

May cause damage to organs if swallowed.

May cause damage to organs through prolonged or repeated

exposure if swallowed.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

#### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

according to the Globally Harmonized System



## **Imidocarb Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not breathe mist or vapours.

Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labelled containers.

Store locked up.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
imidocarb	27885-92-3	TWA	40 μg/m3 (OEB 3)	Internal
		Wipe limit	400 μg/100 cm <sup>2</sup>	Internal

**Engineering measures** : Use appropriate engineering controls and manufacturing

technologies to control airborne concentrations (e.g., drip-less

quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Laboratory operations do not require special containment.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

according to the Globally Harmonized System



## **Imidocarb Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

Filter type : Particulates type

Hand protection

Material : Chemical-resistant gloves

Eye protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Skin and body protection : Work uniform or laboratory coat.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : Colorless to pale yellow

Odour : No data available

Odour Threshold : No data available

pH : 4.0 - 5.5

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

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## **Imidocarb Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

Relative vapour density : No data available

Relative density : No data available

Density : 0.900 - 1.100 g/cm<sup>3</sup>

No data available

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle characteristics

Particle size : Not applicable

#### 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reac- : Can react with strong oxidizing agents.

tions

Conditions to avoid : None known. Incompatible materials : Oxidizing agents

Hazardous decomposition : No hazardous decomposition products are known.

products

### 11. TOXICOLOGICAL INFORMATION

Information on likely routes of : Inhalation

exposure Skin contact Ingestion

Eye contact

**Acute toxicity** 

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

according to the Globally Harmonized System



## **Imidocarb Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 28.09.2024
 7677564-00010
 Date of first issue: 15.12.2020

### **Components:**

### imidocarb:

Acute oral toxicity : LD50 (Rat): 1,216 - 1,652 mg/kg

LD50 (Mouse): 544 - 702 mg/kg

LD50 (Rabbit): 317 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Acute toxicity (other routes of :

administration)

LD50 (Rat): 32.7 mg/kg

Application Route: Intravenous

LD50 (Mouse): 22.3 mg/kg Application Route: Intravenous

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

imidocarb:

Remarks : No data available

## Serious eye damage/eye irritation

Not classified based on available information.

### Components:

imidocarb:

Remarks : No data available

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

### Respiratory sensitisation

Not classified based on available information.

## **Components:**

imidocarb:

Remarks : No data available

#### Germ cell mutagenicity

Not classified based on available information.

according to the Globally Harmonized System



## **Imidocarb Formulation**

**Revision Date:** Date of last issue: 30.09.2023 Version SDS Number: 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

### **Components:**

### imidocarb:

Genotoxicity in vitro Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: Chromosome aberration test in vitro

Result: equivocal

Genotoxicity in vivo Test Type: Mammalian erythrocyte micronucleus test (in vivo

> cytogenetic assay) Species: Rat

Application Route: Oral

Result: negative

Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse Application Route: Oral

Result: negative

## Carcinogenicity

Not classified based on available information.

### **Components:**

## imidocarb:

Species Rat Application Route Oral Exposure time 104 weeks

LOAEL 240 mg/kg body weight

: negative Result

Target Organs Mammary gland

The mechanism or mode of action may not be relevant in hu-Remarks

mans.

### Reproductive toxicity

Suspected of damaging the unborn child.

## Components:

## imidocarb:

Effects on fertility Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Oral

Fertility: LOAEL: 135 mg/kg body weight

Result: Adverse neonatal effects.

Test Type: Two-generation reproduction toxicity study

Species: Rat

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## **Imidocarb Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 28.09.2024
 7677564-00010
 Date of first issue: 15.12.2020

Application Route: Oral

Fertility: NOAEL: 45 mg/kg body weight

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Oral

Developmental Toxicity: LOAEL: 76 mg/kg body weight Result: Effects on foetal development, No teratogenic effects

Test Type: Embryo-foetal development

Species: Rat

Application Route: Oral

Developmental Toxicity: NOAEL: 19 mg/kg body weight

Test Type: Embryo-foetal development

Species: Rabbit Application Route: Oral

Developmental Toxicity: NOAEL: 20 mg/kg body weight

Result: No effects on foetal development

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.

### STOT - single exposure

May cause damage to organs (Central nervous system) if swallowed.

#### **Components:**

### imidocarb:

Target Organs : Central nervous system
Assessment : Causes damage to organs.

### STOT - repeated exposure

May cause damage to organs (Liver, Kidney) through prolonged or repeated exposure if swallowed.

### **Components:**

#### imidocarb:

Target Organs : Liver, Kidney

Assessment : Causes damage to organs through prolonged or repeated

exposure.

## Repeated dose toxicity

### **Components:**

#### imidocarb:

Species : Rat

LOAEL : 125 mg/kg
Application Route : Oral
Exposure time : 90 Days
Target Organs : Liver

according to the Globally Harmonized System



## **Imidocarb Formulation**

Version **Revision Date:** Date of last issue: 30.09.2023 SDS Number: 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

Species Rat NOAEL 76 mg/kg LOAEL 415 mg/kg Application Route Oral Exposure time 90 Days Target Organs Liver

Species Dog LOAEL 5 mg/kg Application Route Oral Exposure time 90 Days Target Organs : Liver, Kidney

Symptoms muscle twitching, Salivation, recumbency, ataxia, splayed legs

Species Rat NOAEL 15 mg/kg LOAEL 60 mg/kg Application Route Oral Exposure time

104 Weeks

Target Organs : Liver, Kidney, Blood

Monkey Species NOAEL 5 mg/kg Application Route Oral Exposure time 30 Days

Remarks No significant adverse effects were reported

## **Aspiration toxicity**

Not classified based on available information.

#### **Experience with human exposure**

### **Components:**

### imidocarb:

Inhalation Target Organs: Central nervous system

Symptoms: Salivation, muscle twitching, Tremors, Lachry-

mation, ataxia, lethargy

Remarks: Based on Animal Evidence

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

No data available

### Persistence and degradability

No data available

### **Bioaccumulative potential**

### **Components:**

## imidocarb:

according to the Globally Harmonized System



## **Imidocarb Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 28.09.2024
 7677564-00010
 Date of first issue: 15.12.2020

Partition coefficient: n-

octanol/water

log Pow: 3.88

### Mobility in soil

No data available

#### Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods** 

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

### International Regulations

### **UNRTDG**

Not regulated as a dangerous good

#### **IATA-DGR**

Not regulated as a dangerous good

### **IMDG-Code**

Not regulated as a dangerous good

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### Special precautions for user

Not applicable

### 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mix-

The components of this product are reported in the following inventories:

DSL : not determined

AICS : not determined

IECSC : not determined

### **16. OTHER INFORMATION**

Revision Date : 28.09.2024

according to the Globally Harmonized System



## **Imidocarb Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.0 28.09.2024 7677564-00010 Date of first issue: 15.12.2020

#### **Further information**

Sources of key data used to compile the Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agentic by the current and the company of the current and the cu

cy, http://echa.europa.eu/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan): ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature: SDS - Safety Data Sheet: TCSI - Taiwan Chemical Substance Inventory: TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

according to the Globally Harmonized System



# **Imidocarb Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 2.0
 28.09.2024
 7677564-00010
 Date of first issue: 15.12.2020

IN / EN