according to GB/T 16483 and GB/T 17519



# **Mianserin Formulation**

Version Revision Date: SDS Number: Date of last issue: 2019/04/24 1.5 2019/09/13 1601112-00006 Date of first issue: 2017/05/01

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Mianserin Formulation

Manufacturer or supplier's details

Company : Organon & Co.

Address : 30 Hudson Street, 33nd floor

Jersey City, New Jersey, U.S.A 07302

Telephone : 551-430-6000

Emergency telephone number : 215-631-6999

E-mail address : EHSSTEWARD@organon.com

Recommended use of the chemical and restrictions on use

Recommended use : Pharmaceutical

#### 2. HAZARDS IDENTIFICATION

### **Emergency Overview**

Appearance: Crystalline solidColour: white to off-whiteOdour: No data available

Suspected of damaging fertility. Suspected of damaging the unborn child. Causes damage to

organs.

**GHS Classification** 

Reproductive toxicity : Category 2

Specific target organ toxicity - :

single exposure

Category 1

**GHS** label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H361fd Suspected of damaging fertility. Suspected of damag-

ing the unborn child.

H370 Causes damage to organs.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

according to GB/T 16483 and GB/T 17519



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and understood.

P260 Do not breathe dust.

P264 Wash skin 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 + P311 IF exposed or concerned: Call a POISON

CENTER/doctor.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

## Physical and chemical hazards

Not classified based on available information.

### **Health hazards**

Suspected of damaging fertility. Suspected of damaging the unborn child. Causes damage to organs.

## **Environmental hazards**

Not classified based on available information.

# 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)	
mianserin hydrochloride	21535-47-7	>= 10 -< 20	
Starch	9005-25-8	>= 10 -< 20	

# 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.

according to GB/T 16483 and GB/T 17519



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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. Suspected of damaging fertility. Suspected of damaging the

Most important symptoms and effects, both acute and

delayed

unborn child.
Causes damage to organs.

Protection of first-aiders : First Aid responders should

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 None known.

Unsuitable extinguishing

media

Specific hazards during fire-

fighting

Hazardous combustion prod-

ucts

Carbon oxides

Metal oxides

Oxides of phosphorus

Silicon oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

Exposure to combustion products may be a hazard to health.

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, protec-

tive equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice and personal protective equip-

ment recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so. 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

Sweep up or vacuum up spillage and collect in suitable con-

tainer for disposal.

Local or national regulations may apply to releases and dis-

according to GB/T 16483 and GB/T 17519



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posal 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

Handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation
Advice on safe handling

Use only with adequate ventilation.Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

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

sessment

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

environment.

Avoidance of contact : Oxidizing agents

Storage

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

Packaging material : Unsuitable material: None known.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis	
		exposure)	concentration		
mianserin hydrochloride	21535-47-7	TWA	20 μg/m3 (OEB 3)	Internal	
	Further information: Skin				
		Wipe limit	200 μg/100 cm <sup>2</sup>	Internal	
Starch	9005-25-8	TWA	10 mg/m3	ACGIH	

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

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.

Filter type : Particulates type

Eye/face protection : Wear the following personal protective equipment:

according to GB/T 16483 and GB/T 17519

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Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending

on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the

end of workday.

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

eye flushing systems and safety showers close to the work-

ing place.

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

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Crystalline solid

Colour : white to off-white

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : Not classified as a flammability hazard

Flammability (liquids) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

according to GB/T 16483 and GB/T 17519

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Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

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 : Not applicable

Particle size : No data available

#### 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

products

No hazardous decomposition products are known.

#### 11. TOXICOLOGICAL INFORMATION

Exposure routes : 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 GB/T 16483 and GB/T 17519



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#### **Components:**

mianserin hydrochloride:

Acute oral toxicity : LD50 (Rat): 780 mg/kg

LD50 (Mouse): 224 mg/kg

Acute toxicity (other routes of :

administration)

LD50 (Mouse): 32 mg/kg

Application Route: Intravenous

Starch:

Acute oral toxicity : LD50 (Mouse): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

**Components:** 

mianserin hydrochloride:

Remarks : Not classified due to lack of data.

Serious eye damage/eye irritation

Not classified based on available information.

**Components:** 

mianserin hydrochloride:

Remarks : Not classified due to lack of data.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

**Components:** 

mianserin hydrochloride:

Remarks : Not classified due to lack of data.

Germ cell mutagenicity

Not classified based on available information.

**Components:** 

mianserin hydrochloride:

Genotoxicity in vitro : Test Type: gene mutation test

Result: positive

Test Type: Bacterial reverse mutation assay (AMES)

according to GB/T 16483 and GB/T 17519



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Result: negative

Remarks: Based on data from similar materials

Test Type: sister chromatid exchange assay

Result: negative

Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: unscheduled DNA synthesis assay

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Rat

Cell type: Bone marrow Application Route: Oral Result: negative

Describe Described late (a)

Remarks: Based on data from similar materials

#### Carcinogenicity

Not classified based on available information.

### **Components:**

mianserin hydrochloride:

Remarks : Not classified due to lack of data.

## Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.

#### Components:

## mianserin hydrochloride:

Effects on fertility : Test Type: Fertility

Species: Rat, male

Fertility: NOAEL: 100 mg/kg body weight

Result: No effects on fertility, No effects on mating perfor-

mance

Test Type: Fertility Species: Rat, female

Fertility: LOAEL: 30 mg/kg body weight

Result: Preimplantation loss, ovarian dysfunction, Effect on

estrous cycle

Effects on foetal develop-

ment

Test Type: Development

Species: Rat

Application Route: Subcutaneous

Developmental Toxicity: LOAEL: 10 mg/kg body weight

Result: Effects on postnatal development

according to GB/T 16483 and GB/T 17519



# **Mianserin Formulation**

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Test Type: Development

Species: Rat

Developmental Toxicity: LOAEL: 3 mg/kg body weight Result: Embryolethal effects, No teratogenic effects

Test Type: Development

Species: Rabbit

Result: Reduced foetal weight, No teratogenic effects

Test Type: Development

Species: Mouse

Developmental Toxicity: NOAEL: 30 mg/kg body weight

Result: No effects on foetal development

Reproductive toxicity - As-

sessment

Suspected of damaging fertility. Suspected of damaging the

unborn child.

## STOT - single exposure

Causes damage to organs.

### **Components:**

### mianserin hydrochloride:

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

#### STOT - repeated exposure

Not classified based on available information.

## Repeated dose toxicity

#### **Components:**

### mianserin hydrochloride:

Species : Rat

NOAEL : 30 mg/kg

Application Route : Oral

Exposure time : 6 Months

Remarks : No significant adverse effects were reported

Species : Dog

LOAEL : 3 - 30 mg/kg Application Route : Oral

Exposure time : 6 Months

Symptoms : Reduced body weight

## **Aspiration toxicity**

Not classified based on available information.

according to GB/T 16483 and GB/T 17519

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### **Experience with human exposure**

## **Components:**

mianserin hydrochloride:

Inhalation : Remarks: May be harmful if inhaled.

May cause irritation of respiratory tract.

Skin contact : Remarks: Can be absorbed through skin.

May irritate skin.

Eye contact : Remarks: May irritate eyes.

Ingestion : Symptoms: central nervous system effects, dry mouth, consti-

pation, Headache, Tremors

#### 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

No data available

### Persistence and degradability

No data available

## **Bioaccumulative potential**

# **Components:**

## mianserin hydrochloride:

Partition coefficient: n-

octanol/water

: log Pow: 3.36

# Mobility in soil

No data available

#### Other adverse effects

No data available

#### 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : 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

according to GB/T 16483 and GB/T 17519



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## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**National Regulations** 

GB 6944/12268

Not regulated as a dangerous good

Special precautions for user

Not applicable

### 15. REGULATORY INFORMATION

**National regulatory information** 

Law on the Prevention and Control of Occupational Diseases

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

AICS : not determined

DSL : not determined

IECSC : not determined

#### **16. OTHER INFORMATION**

**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 Agen-

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

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

AICS - Australian Inventory of Chemical Substances; 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 Con-

according to GB/T 16483 and GB/T 17519



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centration 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; 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

#### **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 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.

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