

Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

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

1.1 Product identifier

Trade name : Sotatercept Solid Formulation

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

Use of the Sub-

stance/Mixture

: Pharmaceutical

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

117 16th Road

1685 Halfway house, Midrand, South Africa

Telephone : +27 11 655 3000

E-mail address of person

responsible for the SDS

EHSDATASTEWARD@msd.com

1.4 Emergency telephone number

+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 1B H360FD: May damage fertility. May damage the

unborn child.

Specific target organ toxicity - repeated

exposure, Category 1

H372: Causes damage to organs through pro-

longed or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word : Danger

Hazard statements : H360FD May damage fertility. May damage the unborn

child.

H372 Causes damage to organs through prolonged or re-

peated exposure.



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

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 + P313 IF exposed or concerned: Get medical advice/

attention.

Hazardous components which must be listed on the label:

Sotatercept

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Dust contact with the eyes can lead to mechanical irritation.

Contact with dust can cause mechanical irritation or drying of the skin.

May form explosive dust-air mixture during processing, handling or other means.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Sotatercept	1001080-50-7	Repr. 1B; H360FD STOT RE 1; H372 (Blood, Immune system, Liver)	>= 30 - < 50

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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.

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).



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

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 : If in eyes, rinse well with water.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May damage fertility. May damage the unborn child.

Causes damage to organs through prolonged or repeated

exposure.

Contact with dust can cause mechanical irritation or drying of

the skin.

Dust contact with the eyes can lead to mechanical irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a

potential dust explosion hazard.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides Metal oxides



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

5.3 Advice for firefighters

Special protective equipment:

for firefighters

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

Use personal protective equipment.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

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

tective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable con-

tainer for disposal.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces

with compressed air).

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. 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.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Static electricity may accumulate and ignite suspended dust

causing an explosion.

Provide adequate precautions, such as electrical grounding

and bonding, or inert atmospheres.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe dust. Do not swallow.

Avoid contact with eyes.

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

Keep container tightly closed.

Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product.

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

environment.

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 contami-

nated 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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national

regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides

Explosives Gases

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

<u> </u>						
Components	CAS-No.	Value type (Form	Control parameters	Basis		
		of exposure)				
Sucrose	57-50-1	OEL-RL	10 mg/m3	ZA OEL		
	Further inforn	Further information: Occupational Exposure Limits - Restricted Limits For				
	Hazardous C	Hazardous Chemical Agents				
Sotatercept	1001080-	TWA	20 μg/m3 (OEB 3)	Internal		



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

	50-7			
		Wipe limit	200 μg/100 cm2	Internal

8.2 Exposure controls

Engineering measures

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.

Personal protective equipment

Eye/face 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.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Skin and body protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable

suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

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 (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : powder

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 : Not applicable



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

Flammability (solid, gas) : May form explosive dust-air mixture during processing, han-

dling or other means.

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available Partition coefficient: n- : Not applicable

octanol/water

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

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

9.2 Other information

Flammability (liquids) : Not applicable

Molecular weight : 160 kg/mol

Particle size : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : May form explosive dust-air mixture during processing, han-

dling or other means.

Can react with strong oxidizing agents.

10.4 Conditions to avoid



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

Conditions to avoid : Heat, flames and sparks.

Avoid dust formation.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of : Inhalation exposure Skin contact

Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Components:

Sotatercept:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Acute toxicity (other routes of :

administration) Remarks: No data available

Skin corrosion/irritation

Not classified based on available information.

Components:

Sotatercept:

Remarks : No data available

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Sotatercept:

Remarks : No data available

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

Respiratory sensitisation

Not classified based on available information.

Components:

Sotatercept:

Remarks : No data available

Germ cell mutagenicity

Not classified based on available information.

Components:

Sotatercept:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Germ cell mutagenicity- As-

sessment

: No data available

Carcinogenicity

Not classified based on available information.

Components:

Sotatercept:

Remarks : No data available

Carcinogenicity - Assess-

ment

No data available

Reproductive toxicity

May damage fertility. May damage the unborn child.

Components:

Sotatercept:

Effects on fertility : Test Type: reproductive and developmental toxicity study

Species: Rat, male and female Application Route: Subcutaneous Fertility: LOAEL: 0,3 mg/kg body weight

Method: Study of Fertility and Early Embryonic Development

to Implantation

Result: Reduced fertility, Increased resorptions., Increase of early resorptions, Effects on fertility, Postimplantation loss.,

alteration in sperm morphology

Test Type: Reproduction/Developmental toxicity screening

test

Species: Rabbit, female

Application Route: Subcutaneous

General Toxicity - Parent: NOAEL: 5 mg/kg body weight Early Embryonic Development: NOAEL: 0,5 mg/kg body

weight

Method: Study of Fertility and Early Embryonic Development



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

to Implantation

Test Type: Fertility/early embryonic development

Species: Rat, females

Application Route: Subcutaneous

General Toxicity - Parent: NOAEL: 5 mg/kg body weight Method: Study of Fertility and Early Embryonic Development

to Implantation

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Subcutaneous

General Toxicity Maternal: NOAEL: 50 mg/kg body weight Developmental Toxicity: NOAEL: 5 mg/kg body weight

Test Type: Fertility/early embryonic development

Species: Rabbit

Application Route: Subcutaneous

General Toxicity Maternal: NOAEL: 5 mg/kg body weight Developmental Toxicity: NOAEL: 0,5 mg/kg body weight

Reproductive toxicity - As-

sessment

Clear evidence of adverse effects on development, based on animal experiments., Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

Not classified based on available information.

Components:

Sotatercept:

Remarks : No data available

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Components:

Sotatercept:

Target Organs : Blood, Immune system, Liver

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Remarks : Based on human experience.

Repeated dose toxicity

Components:

Sotatercept:

Species : Rat, male and female

NOAEL : 3 mg/kg
Application Route : Intravenous
Exposure time : 3 Months
Number of exposures : Once weekly



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

Target Organs : Blood, male reproductive organs

Species : Monkey, male and female

NOAEL : 30 mg/kg
Application Route : Intravenous
Exposure time : 3 Months
Number of exposures : Once weekly
Target Organs : Blood, Kidney

Species : Monkey, male and female

NOAEL : 1 mg/kg
Application Route : Intravenous
Exposure time : 9 Months

Number of exposures : Once every 4 weeks

Target Organs : Blood, Kidney, Immune system

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

Sotatercept:

General Information : Well tolerated in clinical use Inhalation : Remarks: No data available Skin contact : Remarks: No data available Eye contact : Remarks: No data available Ingestion : Remarks: No data available

Further information

Components:

Sotatercept:

Remarks : Well tolerated in clinical use

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting poten-

tial

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

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.

SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good



Sotatercept Solid Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 10607435-00009 Date of first issue: 14.02.2022 3.0

IMDG Not regulated as a dangerous good **IATA** Not regulated as a dangerous good

14.4 Packing group

ADN Not regulated as a dangerous good **ADR** Not regulated as a dangerous good **RID** Not regulated as a dangerous good **IMDG** Not regulated as a dangerous good IATA (Cargo) Not regulated as a dangerous good IATA (Passenger) Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

: Not applicable for product as supplied. Remarks

SECTION 15: Regulatory information

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

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

AICS not determined

DSL not determined

IECSC not determined

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

Full text of H-Statements

H360FD May damage fertility. May damage the unborn child. H372 Causes damage to organs through prolonged or repeated

exposure.

Full text of other abbreviations

Repr. Reproductive toxicity

STOT RE Specific target organ toxicity - repeated exposure



Sotatercept Solid Formulation

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

 3.0
 06.04.2024
 10607435-00009
 Date of first issue: 14.02.2022

ZA OEL : South Africa. The Regulations for Hazardous Chemical

Agents, Occupational Exposure Limits

ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour expo-

sure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern: TCSI - Taiwan Chemical Substance Inventory: 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

Further information

Sources of key data used to compile the Safety Data

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

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

Classification of the mixture: Classification procedure:

Repr. 1B H360FD Calculation method STOT RE 1 H372 Calculation method

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

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



Sotatercept Solid Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 3.0 06.04.2024 10607435-00009 Date of first issue: 14.02.2022

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.

ZA / EN