

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

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

1.1 Product identifier

Trade name : Zilpaterol Formulation

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

Use of the Substance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
Kilsheelan
Clonmel Tipperary, IE

Telephone : 353-51-601000

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)

Specific target organ toxicity - repeated exposure, Category 2 H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H373 May cause damage to organs through prolonged or repeated exposure.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

Precautionary statements

Prevention:

P260 Do not breathe dust.

Response:

P314 Get medical advice/ attention if you feel unwell.

Hazardous components which must be listed on the label:

Zilpaterol

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.

Ecological information: 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.

Toxicological information: 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.

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) |
|---------------|---|--|--------------------------|
| Zilpaterol | 119520-06-8 | Acute Tox. 4; H302 Acute Tox. 4; H332 STOT RE 1; H372 (Cardio-vascular system, Central nervous system, Lungs) Acute toxicity esti- mate Acute oral toxicity: 500 mg/kg | >= 1 - < 10 |

For explanation of abbreviations see section 16.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

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 advice 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). |
| If inhaled | : If inhaled, remove to fresh air. Get medical attention if symptoms occur. |
| In case of skin contact | : In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if symptoms occur. |
| In case of eye contact | : If in eyes, rinse well with water. Get medical attention if irritation develops and persists. |
| If swallowed | : If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water. |

4.2 Most important symptoms and effects, both acute and delayed

| | |
|-------|---|
| Risks | : Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation. May cause damage to organs through prolonged or repeated exposure. |
|-------|---|

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 (CO ₂) Dry chemical |
| Unsuitable extinguishing media | : None known. |

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

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 products : Carbon oxides
Nitrogen oxides (NOx)

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 methods : Use extinguishing measures that are appropriate to local circumstances 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 protective 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 container 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 determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

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 | : Use only with adequate ventilation. |
| Advice on safe handling | : Do not breathe dust. 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 assessment 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 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. |

7.2 Conditions for safe storage, including any incompatibilities

| | |
|---|--|
| Requirements for storage areas and containers | : Keep in properly labelled containers. 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 |
|-----------------|---------------------|

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version 4.2 Revision Date: 05.06.2025 SDS Number: 29190-00030 Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| | |
|------|---|
| Dust | 5 mg/m ³ Value type (Form of exposure): TWA (respirable dust) Basis: FOR-2011-12-06-1358 |
| | 10 mg/m ³ Value type (Form of exposure): TWA (total dust) Basis: FOR-2011-12-06-1358 |

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|------------|-------------|-------------------------------|-----------------------------|----------|
| Zilpaterol | 119520-06-8 | TWA | 1 µg/m ³ (OEB 4) | Internal |
| | | Wipe limit | 10 µg/100 cm ² | Internal |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|--------------------------------|-----------|-----------------|----------------------------|------------------------|
| Polyethylene glycol castor oil | Workers | Inhalation | Long-term systemic effects | 16,4 mg/m ³ |
| | Workers | Skin contact | Long-term systemic effects | 4,67 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 2,9 mg/m ³ |
| | Consumers | Skin contact | Long-term systemic effects | 1,67 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 1,67 mg/kg bw/day |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

| Substance name | Environmental Compartment | Value |
|--------------------------------|-----------------------------|---------------------------------|
| Polyethylene glycol castor oil | Fresh water | 0,000 mg/l |
| | Freshwater - intermittent | 0,0661 mg/l |
| | Marine water | 0,000 mg/l |
| | Marine water - intermittent | 0,00661 mg/l |
| | Fresh water sediment | 0,0129 mg/kg dry weight (d.w.) |
| | Marine sediment | 0,00129 mg/kg dry weight (d.w.) |
| | Soil | 0,00258 mg/kg dry weight (d.w.) |

8.2 Exposure controls

Engineering measures

The information below is intended for larger pilot/commercial-scale operations and manufacturing.
For smaller scale, clinical, or pharmacy settings, site-specific internal risk assessment practices

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

should be conducted to determine appropriate exposure control measures. The health hazard risks of handling this material are dependent on multiple factors, including but not limited to physical form and quantity handled. If applicable, use process enclosures, local exhaust ventilation (e.g., Biosafety Cabinet, Ventilated Balance Enclosures), or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels as low as reasonably achievable.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., vacuum conveying from a closed system, packout head with inflatable seal from stationary container, ventilated enclosure, etc.).

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

Essentially no open handling permitted.

Use closed processing systems or containment technologies.

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 exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to NS EN 143 |
| Filter type | : Particulates type (P) |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|-----------------------------------|---------------------|
| Physical state | : powder |
| Colour | : tan |
| Odour | : No data available |
| Odour Threshold | : No data available |
| Melting point/freezing point | : No data available |
| Initial boiling point and boiling | : No data available |

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

range

Flammability (solid, gas) : May form explosive dust-air mixture during processing, handling or other means.

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Solubility(ies)
Water solubility : No data available

Partition coefficient: n-octanol/water : Not applicable

Vapour pressure : Not applicable

Relative density : No data available

Density : No data available

Relative vapour density : Not applicable

Particle characteristics
Particle size : No data available

9.2 Other information

Explosives : Not explosive

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

Evaporation rate : Not applicable

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

Molecular weight : 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, handling or other means.
Can react with strong oxidizing agents.

10.4 Conditions to avoid

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 hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

Zilpaterol:

Acute oral toxicity : LD50 (Mouse, male and female): 430 - 580 mg/kg

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

LD50 (Rat, male and female): 890 - 1.325 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Symptoms: Tremors, Breathing difficulties

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

Acute toxicity (other routes of administration) : TDLo (Rabbit): 9.6 %
Application Route: see user defined free text
Symptoms: Increased pulse rate

Skin corrosion/irritation

Not classified based on available information.

Components:

Zilpaterol:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Zilpaterol:

Species : Rabbit
Result : Mild eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Zilpaterol:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Result : negative

Germ cell mutagenicity

Not classified based on available information.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

Components:

Zilpaterol:

Genotoxicity in vitro

: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Result: negative

Test Type: Mouse Lymphoma
Test system: mouse lymphoma cells
Result: negative

Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Result: negative

Genotoxicity in vivo

: Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: in vivo assay
Species: Mouse
Cell type: Bone marrow
Application Route: Oral
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Zilpaterol:

Species

: Rat, male and female

Application Route

: oral (feed)

Exposure time

: 104 weeks

: 0,05 mg/kg body weight

: 0,125 mg/kg body weight

Result

: negative

Target Organs

: Ovary

Species

: Mouse

Application Route

: Oral

Exposure time

: 18 Months

: 0,02 mg/kg body weight

: 0,05 mg/kg body weight

Result

: negative

Target Organs

: Blood

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

Reproductive toxicity

Not classified based on available information.

Components:

Zilpaterol:

Effects on fertility

: Test Type: Two-generation study
Species: Rat, male
Application Route: oral (feed)
Fertility: NOAEL: 1,8 mg/kg body weight
Result: No effects on fertility and early embryonic development were detected.

Test Type: Two-generation study
Species: Rat, male
Application Route: oral (feed)
Fertility: NOAEL: 0,94 mg/kg body weight
Result: No effects on fertility and early embryonic development were detected.

Effects on foetal development

: Test Type: Embryo-foetal development
Species: Rat, female
Application Route: Oral
Developmental Toxicity: NOAEL: 10 mg/kg body weight
Embryo-foetal toxicity: LOAEL: 50 mg/kg body weight
Result: No teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Zilpaterol:

Target Organs
Assessment

: Cardio-vascular system, Central nervous system, Lungs
: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Zilpaterol:

Species : Monkey
NOAEL : 0,01 mg/kg
LOAEL : 0,05 mg/kg
Application Route : Oral
Exposure time : 4 Weeks
Target Organs : Cardio-vascular system

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

| | | |
|-------------------|---|--|
| Symptoms | : | Increased pulse rate, Lowered blood pressure |
| Species | : | Rat, male and female |
| LOAEL | : | 0,05 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 13 Weeks |
| Target Organs | : | Cardio-vascular system |
| Symptoms | : | Lowered blood pressure |
| Species | : | Pig, male and female |
| NOAEL | : | 0,05 mg/kg |
| LOAEL | : | 1 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 13 Weeks |
| Target Organs | : | Heart |
| Species | : | Rat, male and female |
| NOAEL | : | 0,250 mg/kg |
| Application Route | : | oral (feed) |
| Exposure time | : | 52 Weeks |
| Target Organs | : | Cardio-vascular system |
| Symptoms | : | slow pulse |
| Species | : | Dog |
| Application Route | : | Dermal |
| Remarks | : | No significant adverse effects were reported |

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Not classified based on available information.

Product:

| | | |
|------------|---|---|
| Assessment | : | 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. |
|------------|---|---|

Experience with human exposure

Components:

Zilpaterol:

| | | |
|-----------|---|--|
| Ingestion | : | Target Organs: Lungs Symptoms: Tremors, Increased pulse rate Target Organs: Central nervous system |
|-----------|---|--|

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

SECTION 12: Ecological information

12.1 Toxicity

Components:

Zilpaterol:

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

12.2 Persistence and degradability

Components:

Zilpaterol:

Stability in water : Hydrolysis: 0 %(5 d)

12.3 Bioaccumulative potential

Components:

Zilpaterol:

Partition coefficient: n-octanol/water : log Pow: 1

12.4 Mobility in soil

Components:

Zilpaterol:

Distribution among environmental compartments : log Koc: 2,8

12.5 Results of PBT and vPvB assessment

Product:

Assessment : 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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

12.6 Endocrine disrupting properties

Product:

Assessment

: 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.

12.7 Other adverse effects

No data available

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 handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID 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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

RID : Not regulated as a dangerous good

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 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Other regulations:

Note the regulation on organization, leadership and participation, chapter 12 on the work of children and young people.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

| | | | |
|----------------|------------------------------|----------------------------|---|
| Version 4.2 | Revision Date: 05.06.2025 | SDS Number: 29190-00030 | Date of last issue: 14.04.2025 Date of first issue: 07.11.2014 |
|----------------|------------------------------|----------------------------|---|

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

| | |
|------|---|
| H302 | : Harmful if swallowed. |
| H332 | : Harmful if inhaled. |
| H372 | : Causes damage to organs through prolonged or repeated exposure. |

Full text of other abbreviations

| | |
|-----------------------|--|
| Acute Tox. | : Acute toxicity |
| STOT RE | : Specific target organ toxicity - repeated exposure |
| FOR-2011-12-06-1358 | : Norway. Occupational Exposure limits |
| FOR-2011-12-06-1358 / | : Long term exposure limit |
| TWA | |

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; KECL - 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 sub-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878



Zilpaterol Formulation

Version
4.2

Revision Date:
05.06.2025

SDS Number:
29190-00030

Date of last issue: 14.04.2025
Date of first issue: 07.11.2014

stance; 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 Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

STOT RE 2

H373

Classification procedure:

Calculation method

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.

NO / EN