

Cloprostenol (with Propylene Glycol) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 28.09.2024 5266459-00009 Date of first issue: 14.11.2019 2.7

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Cloprostenol (with Propylene Glycol) Formulation

Manufacturer or supplier's details

Company name of supplier **MSD**

Address 126 E. Lincoln Avenue

Rahway, New Jersey U.S.A. 07065

Telephone 908-740-4000 Emergency telephone 1-908-423-6000

E-mail address EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use Veterinary product Not applicable Restrictions on use

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate$	55028-72-3	< 0.1

SECTION 4. FIRST AID MEASURES

If inhaled If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

: Wash with water and soap as a precaution. In case of skin contact

Get medical attention if symptoms occur. : Flush eyes with water as a precaution.

In case of eye contact Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms

and effects, both acute and

delayed

If swallowed

None known.



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

 2.7
 28.09.2024
 5266459-00009
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Protection of first-aiders Notes to physician : No special precautions are necessary for first aid responders.

: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING 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 fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

Follow safe handling advice (see section 7) and personal protective 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 diking or other appropriate

containment to keep material from spreading. If diked material

can be pumped, store recovered material in appropriate

container.

Clean up remaining materials from spill with suitable

absorbent.

Local or national regulations may apply to releases and



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

 2.7
 28.09.2024
 5266459-00009
 Date of first issue: 14.11.2019

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.

SECTION 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 : 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

assessment

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.

Conditions for safe storage : Keep in properly labeled containers.

Store in accordance with the particular national regulations.

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

Strong oxidizing agents

Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis	
Sodium [1α(Z),2β(1E,3R*),3α,5α]-(+/-)- 7-[2-[4-(3-chlorophenoxy)-3- hydroxybut-1-enyl]-3,5- dihydroxycyclopentyl]hept-5- enoate	55028-72-3	TWA	0.01 ug/m3 (OEB 5)	Internal	
	Further information: RSEN, Skin				
		Wipe limit	0.1 ug/100 cm2	Internal	

Engineering measures : Use closed processing systems or containment technologies

to control at source (e.g., glove boxes/isolators) and to



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

 2.7
 28.09.2024
 5266459-00009
 Date of first issue: 14.11.2019

prevent leakage of compounds into the workplace.

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

protect products, workers, and the environment.

No open handling permitted.

Totally enclosed processes and materials transport systems

are required.

Operations require the use of appropriate containment technology designed to prevent leakage of compounds into

the workplace.

Personal protective equipment

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

exposure assessment demonstrates exposures outside the

recommended guidelines, use respiratory protection.

Filter type

Hand protection

Particulates type

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aqueous solution

Color : colorless

Odor : characteristic

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : -6 °C

Initial boiling point and boiling :

range

99 °C

Flash point : No data available



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Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

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

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 1.02 - 1.08

Density : No data available

Solubility(ies)

Water solubility : soluble

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : 1.56 - 1.62 mm²/s

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

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac- :

tions

Can react with strong oxidizing agents.

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

Hazardous decomposition

products

No hazardous decomposition products are known.



Cloprostenol (with Propylene Glycol) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Acute oral toxicity : LD50 (Rat): > 25 mg/kg

Remarks: No mortality observed at this dose.

Acute toxicity (other routes of :

administration)

LD50 (Rat): > 50 mg/kg

Application Route: Subcutaneous

LD50 (Rat): > 50 mg/kg

Application Route: Intramuscular

LD50 (Rat): 5 mg/kg

Application Route: Intravenous

Remarks: No mortality observed at this dose.

LD50 (Mouse): 350 mg/kg Application Route: Intramuscular

LD50 (Mouse): 54.7 mg/kg Application Route: Intravenous

TDLo (Monkey): 0.0025 - 0.025 mg/kg Application Route: Intramuscular

Target Organs: Lungs

Symptoms: Diarrhea, Vomiting, Rapid respiration

TDLo (Monkey): 0.0013 mg/kg Application Route: Intramuscular

Target Organs: ovaries

Skin corrosion/irritation

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Remarks : Not classified due to lack of data.

Can be absorbed through skin.



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Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Remarks : Not classified due to lack of data.

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Result : Sensitizer

Germ cell mutagenicity

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

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

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Chromosomal aberration Test system: Human lymphocytes

Result: equivocal

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal

Result: negative

Carcinogenicity

Not classified based on available information.



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Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Remarks : Not classified due to lack of data.

Reproductive toxicity

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Effects on fertility : Test Type: Three-generation study

Species: Rat

Application Route: Oral

General Toxicity F1: NOAEL: 0.015 mg/kg body weight

Fertility: NOAEL: > 0.04 mg/kg body weight

Result: Animal testing did not show any effects on fertility.

Species: Cattle

Application Route: Intramuscular

General Toxicity Parent: LOAEL: 0.16 µg/kg

Result: positive Remarks: Abortion

Effects on fetal development : Test Type: Development

Species: Rabbit

Application Route: Subcutaneous Teratogenicity: NOAEL: 0.250 µg/kg Result: No teratogenic effects.

Test Type: Development

Species: Rat

Application Route: Oral

Teratogenicity: NOAEL: 100 µg/kg Result: No teratogenic effects.

Reproductive toxicity - As-

May damage fertility.

sessment

STOT-single exposure

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Target Organs : Lungs

Assessment : Causes damage to organs.

STOT-repeated exposure

Not classified based on available information.



Cloprostenol (with Propylene Glycol) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Target Organs : Ovary

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Species : Rat

NOAEL : 0.05 mg/kg
LOAEL : 0.15 mg/kg
Application Route : Oral
Exposure time : 3 Months
Target Organs : Ovary

Species : Rat

LOAEL : 0.0125 mg/kg
Application Route : Subcutaneous
Exposure time : 30 Days
Target Organs : Ovary

Species : Monkey

NOAEL : 0.05 mg/kg

LOAEL : 0.15 mg/kg

Application Route : Oral

Exposure time : 3 Months

Target Organs : Heart, Testis

Aspiration toxicity

Not classified based on available information.

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Not applicable

Experience with human exposure

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

General Information : Target Organs: Uterus (including cervix)

Symptoms: Embryo-fetal toxicity., Fetal mortality., menstrual

irregularities, miscarriage



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Version Revision Date: SDS Number: Date of last issue: 30.09.2023 2.7 28.09.2024 5266459-00009 Date of first issue: 14.11.2019

Target Organs: Lungs

Symptoms: Asthma, bronchospasm

Inhalation : Target Organs: Lungs

Symptoms: bronchospasm, Asthma

Remarks: May cause sensitization of susceptible persons by

inhalation of aerosol or dust.

Target Organs: Uterus (including cervix)

Symptoms: Embryolethal effects., menstrual irregularities

Skin contact : Target Organs: Lungs

Symptoms: bronchospasm

Remarks: Can be absorbed through skin. Target Organs: Uterus (including cervix)

Symptoms: Embryolethal effects.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Sodium $[1\alpha(Z),2\beta(1E,3R^*),3\alpha,5\alpha]-(+/-)-7-[2-[4-(3-chlorophenoxy)-3-hydroxybut-1-enyl]-3,5-dihydroxycyclopentyl]hept-5-enoate:$

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 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

handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations



Cloprostenol (with Propylene Glycol) Formulation

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

 2.7
 28.09.2024
 5266459-00009
 Date of first issue: 14.11.2019

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 Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

NOM-002-SCT

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

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

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

Not applicable

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

AICS : not determined

DSL : not determined

IECSC : not determined

SECTION 16. OTHER INFORMATION

Revision Date : 28.09.2024 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 con-



Cloprostenol (with Propylene Glycol) Formulation

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

 2.7
 28.09.2024
 5266459-00009
 Date of first issue: 14.11.2019

centration; 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

Sources of key data used to compile the Material Safety Data Sheet

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

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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