

**Cloprostenol (with Propylene Glycol) Formulation**

Version 11.0      Revision Date: 2025/04/14      SDS Number: 5266458-00014      Date of last issue: 2024/12/04  
Date of first issue: 2019/11/14

**1. PRODUCT AND COMPANY IDENTIFICATION**

Chemical product name : Cloprostenol (with Propylene Glycol) Formulation

**Supplier's company name, address and phone number**

Company name of supplier : MSD

Address : 1-13-12, Kudan-kita, Chiyoda-ku, Tokyo, Japan

Telephone : 03-6272-1099

E-mail address : EHSDATASTEWARD@msd.com

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

**Recommended use of the chemical and restrictions on use**

Recommended use : Veterinary product

Restrictions on use : Not applicable

**2. HAZARDS IDENTIFICATION****GHS classification of chemical product**

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS).

**GHS label elements**

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

**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)	ENCS No.
Propylene glycol	57-55-6	$\geq 10 - < 20$	2-234
4-Chloro-3-methylphenol	59-50-7	$\geq 0.1 - < 1$	3-900
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	$< 0.1$	-

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**4. FIRST AID MEASURES**

If inhaled	: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	: Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	: Flush eyes with water as a precaution. 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.
Most important symptoms and effects, both acute and delayed	: None known.
Protection of first-aiders	: No special precautions are necessary for first aid responders.
Notes to physician	: Treat symptomatically and supportively.

**5. FIREFIGHTING MEASURES**

Suitable extinguishing media	: Water spray Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical
Unsuitable extinguishing media	: None known.
Specific hazards during fire- fighting	: Exposure to combustion products may be a hazard to health.
Hazardous combustion prod- ucts	: Carbon oxides
Specific extinguishing meth- ods	: Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if nec- essary. Use personal protective equipment.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protec- tive equipment and emer-	: Follow safe handling advice (see section 7) and personal pro- tective equipment recommendations (see section 8).
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gency procedures

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 : Soak up with inert absorbent material.  
containment and cleaning up For large spills, provide dyking or other appropriate contain-  
ment to keep material from spreading. If dyked material can  
be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absor-  
bent.  
Local or national regulations may apply to releases and dis-  
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.

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**7. HANDLING AND STORAGE****Handling**

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 as-  
sessment  
Take care to prevent spills, waste and minimize release to the  
environment.

Avoidance of contact : Oxidizing agents

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.

**Storage**

Conditions for safe storage : Keep in properly labelled containers.

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Materials to avoid : Store in accordance with the particular national regulations.  
Do not store with the following product types:  
Strong oxidizing agents

Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Concentration standard / Permissible concentration	Basis
4-Chloro-3-methylphenol	59-50-7	TWA	200 µg/m <sup>3</sup> (OEB 2)	Internal
		Wipe limit	100 µg/100 cm <sup>2</sup>	Internal
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/m <sup>3</sup> (OEB 5)	Internal
	Further information: RSEN, Skin			
		Wipe limit	0.1 ug/100 cm <sup>2</sup>	Internal

**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 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.

Use closed processing systems or containment technologies to control at source (e.g., glove boxes/isolators) and to 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.

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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	:	Particulates type
Hand protection	:	
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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	:	Aqueous solution
Colour	:	colourless
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/freezing point	:	-6 °C
Boiling point, initial boiling point and boiling range	:	99 °C
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Lower explosion limit and upper explosion limit / flammability limit	:	
Upper explosion limit / Upper per flammability limit	:	No data available
Lower explosion limit /	:	No data available

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Lower flammability limit

Flash point : No data available

Decomposition temperature : No data available

pH : No data available

Evaporation rate : No data available

Auto-ignition temperature : No data available

Viscosity  
Viscosity, kinematic : 1.56 - 1.62 mm<sup>2</sup>/sSolubility(ies)  
Water solubility : solublePartition coefficient: n-  
octanol/water : No data available

Vapour pressure : No data available

Density and / or relative density  
Relative density : 1.02 - 1.08

Density : No data available

Relative vapour density : No data available

Explosive properties : Not explosive

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

Molecular weight : No data available

Particle characteristics  
Particle size : Not applicable

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**10. STABILITY AND REACTIVITY**

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Can react with strong oxidizing agents.
Conditions to avoid	: None known.
Incompatible materials	: Oxidizing agents
Hazardous decomposition	: No hazardous decomposition products are known.

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**11. TOXICOLOGICAL INFORMATION**

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

**Acute toxicity**

Not classified based on available information.

**Components:****Propylene glycol:**

Acute oral toxicity	: LD50 (Rat): 22,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 44.9 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

**4-Chloro-3-methylphenol:**

Acute oral toxicity	: LD50 (Mouse): 600 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 2.871 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rat): > 5,000 mg/kg

**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.

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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: Diarrhoea, 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:****Propylene glycol:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

**4-Chloro-3-methylphenol:**

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Corrosive after 1 to 4 hours of exposure

**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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**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Propylene glycol:**

Species	: Rabbit
Result	: No eye irritation
Method	: OECD Test Guideline 405

**4-Chloro-3-methylphenol:**

Species	: Rabbit
Result	: Irreversible effects on the eye



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|| Method : OECD Test Guideline 405

**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 sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Propylene glycol:**

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative

**4-Chloro-3-methylphenol:**

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig

|| Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

**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 : Sensitiser

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Propylene glycol:**

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative
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	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
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Genotoxicity in vivo	: Test Type: Mammalian erythrocyte micronucleus test (in vivo)
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cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

**4-Chloro-3-methylphenol:**

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

**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.

**Components:****Propylene glycol:**

Species : Rat  
Application Route : Ingestion  
Exposure time : 2 Years  
Result : negative

**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.

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**Components:****Propylene glycol:**

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Result: negative
Effects on foetal develop- ment	: Test Type: Embryo-foetal development Species: Mouse Application Route: Ingestion Result: negative

**4-Chloro-3-methylphenol:**

Effects on fertility	: Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal develop- ment	: Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion Result: negative

**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 $\mu$ g/kg Result: positive Remarks: Abortion
Effects on foetal develop- ment	: Test Type: Development Species: Rabbit Application Route: Subcutaneous Teratogenicity: NOAEL: 0.250 $\mu$ g/kg Result: No teratogenic effects  Test Type: Development Species: Rat Application Route: Oral

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

Reproductive toxicity - Assessment : May damage fertility.

**STOT - single exposure**

Not classified based on available information.

**Components:****4-Chloro-3-methylphenol:**

Assessment : May cause respiratory irritation.

**Sodium [1α(Z),2β(1E,3R\*),3α,5α]-(+/-)-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.

**Components:****Sodium [1α(Z),2β(1E,3R\*),3α,5α]-(+/-)-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:****Propylene glycol:**

Species : Rat, male  
NOAEL : >= 1,700 mg/kg  
Application Route : Ingestion  
Exposure time : 2 yr

**4-Chloro-3-methylphenol:**

Species : Rat  
NOAEL : 200 mg/kg  
LOAEL : 400 mg/kg  
Application Route : Ingestion  
Exposure time : 28 Days

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

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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-foetal toxicity, foetal mortality, menstrual irregularities, miscarriage
	Target Organs: Lungs
	Symptoms: Asthma, bronchospasm
Inhalation	: Target Organs: Lungs
	Symptoms: bronchospasm, Asthma
	Remarks: May cause sensitisation of susceptible persons by inhalation of aerosol or dust.
	Target Organs: Uterus (including cervix)
	Symptoms: Embryo-lethal effects, menstrual irregularities

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Skin contact	: Target Organs: Lungs Symptoms: bronchospasm Remarks: Can be absorbed through skin.
	Target Organs: Uterus (including cervix) Symptoms: Embryoethal effects

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Propylene glycol:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l Exposure time: 7 d
Toxicity to microorganisms	: NOEC (Pseudomonas putida): > 20,000 mg/l Exposure time: 18 h

**4-Chloro-3-methylphenol:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 917 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1.5 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Chlorella pyrenoidosa (algae)): 15 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  EC10 (Chlorella pyrenoidosa (algae)): 2.3 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to daphnia and other	: NOEC (Daphnia magna (Water flea)): 0.32 mg/l

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aquatic invertebrates (Chronic toxicity)	Exposure time: 21 d Method: OECD Test Guideline 211
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Toxicity to microorganisms	: EC50: 22.86 mg/l Exposure time: 60 h
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**Ecotoxicology Assessment**

Acute aquatic toxicity	: Toxic effects cannot be excluded
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Chronic aquatic toxicity	: Toxic effects cannot be excluded
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**Persistence and degradability****Components:****Propylene glycol:**

Biodegradability	: Result: Readily biodegradable. Biodegradation: 98.3 % Exposure time: 28 d Method: OECD Test Guideline 301F
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**4-Chloro-3-methylphenol:**

Biodegradability	: Result: Readily biodegradable. Biodegradation: 78 % Exposure time: 15 d Method: OECD Test Guideline 301
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**Bioaccumulative potential****Components:****Propylene glycol:**

Partition coefficient: n-octanol/water	: log Pow: -1.07 Method: Regulation (EC) No. 440/2008, Annex, A.8
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**4-Chloro-3-methylphenol:**

Bioaccumulation	: Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 5.5 - 13
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Partition coefficient: n-octanol/water	: log Pow: 0.477
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**Mobility in soil**

No data available

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**Hazardous to the ozone layer**

Not applicable

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues	:	Dispose of in accordance with local regulations. 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.

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**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous	:	no

**IATA-DGR**

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

**IMDG-Code**

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	Not applicable



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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**

Refer to section 15 for specific national regulation.

**Special precautions for user**

Not applicable

**15. REGULATORY INFORMATION****Related Regulations****Fire Service Law**

Not applicable to dangerous materials / designated flammables.

**Chemical Substance Control Law**

Priority Assessment Chemical Substance

Chemical name	Number
Propane-1,2-diol	106

**Industrial Safety and Health Law****Harmful Substances Prohibited from Manufacture**

Not applicable

**Harmful Substances Required Permission for Manufacture**

Not applicable

**Substances Prevented From Impairment of Health**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity**

Not applicable

**Substances Subject to be Notified Names**

Law Article 57-2 (Ministerial Order Article 34-2 Appended Table 2)

Chemical name	Concentration (%)	Remarks
Propylene glycol	$\geq 10$ - $< 20$	From April 1st, 2025
4-Chloro-3-methylphenol	$\geq 0.1$ - $< 1$	From April 1st, 2025

**Substances Subject to be Indicated Names**

Law Article 57 (Ministerial Order Article 30 Appended Table 2)

Chemical name	Remarks
Propylene glycol	From April 1st, 2025

**Skin and Eye Damage Substances (ISHL MO Art. 594-2)**

Not applicable

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**Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations)**

Not applicable

**Ordinance on Prevention of Hazards Due to Specified Chemical Substances**

Not applicable

**Ordinance on Prevention of Lead Poisoning**

Not applicable

**Ordinance on Prevention of Tetraalkyl Lead Poisoning**

Not applicable

**Ordinance on Prevention of Organic Solvent Poisoning**

Not applicable

**Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)**

Not applicable

**Poisonous and Deleterious Substances Control Law**

Not applicable

**Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof**

Not applicable

**High Pressure Gas Safety Act**

Not applicable

**Explosive Control Law**

Not applicable

**Vessel Safety Law**

Not regulated as a dangerous good

**Aviation Law**

Not regulated as a dangerous good

**Marine Pollution and Sea Disaster Prevention etc Law**

Bulk transportation : Not classified as noxious liquid substance

Pack transportation : Not classified as marine pollutant

**Narcotics and Psychotropics Control Act**

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable

**Waste Disposal and Public Cleansing Law**

Industrial waste

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

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AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

**16. OTHER INFORMATION**

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

**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/>

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

Date format : yyyy/mm/dd

**Full text of other abbreviations**

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

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portation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

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