

according to the OSHA Hazard Communication Standard

Proligestone Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 09/30/2023
2.11	11/30/2023	3068525-00013	Date of first issue: 08/07/2018

SECTION 1. IDENTIFICATION

Product name	:	Proligestone Formulation
Other means of identification	:	Delvosteron (A004103)

Manufacturer or supplier's details

Company name of supplier	:	Merck & Co., Inc
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@merck.com

Recommended use of the chemical and restrictions on use

Recommended use	:	Pharmaceutical
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	:	Category 2
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - repeated exposure	:	Category 2 (Adrenal gland, Ovary, Uterus (including cervix))

GHS label elements

nazaro picioorams	Hazard	pictograms
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Signal Word	:	Danger
Hazard Statements	:	H351 Suspected of causing cancer. H360D May damage the unborn child. H373 May cause damage to organs (Adrenal gland, Ovary, Uterus (including cervix)) through prolonged or repeated expo- sure.
Precautionary Statements	:	Prevention: P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe mist or vapors.

P280 Wear protective gloves, protective clothing, eye protection and face protection.





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Response:

P308 + P313 IF exposed or concerned: Get medical attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)		
Proligestone	23873-85-0	>= 5 - < 10		
Polyethylene glycol 25322-68-3 >= 1 - < 5				
Actual concentration is withheld as a trade secret				

SECTION 4. 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.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention.
In case of skin contact	:	
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. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Suspected of causing cancer. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.
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).
Notes to physician	:	Treat symptomatically and supportively.



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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 Metal 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	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : tive equipment and emer- gency procedures	Use personal protective equipment. 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 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



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Loca	al/Total ventilation	••••=	S/PERSONAL PROTECTION section. ventilation is unavailable, use with local exhaust
Adv	ice on safe handling	: Do not get Do not brea Do not swa Avoid conta Handle in a practice, ba assessmen Keep conta	ict with eyes. ccordance with good industrial hygiene and safety sed on the results of the workplace exposure t iner tightly closed. o prevent spills, waste and minimize release to the
Con	ditions for safe storage	Store locke Keep tightly	•
Mat	erials to avoid	: Do not stor Strong oxid	e with the following product types: izing agents e substances and mixtures

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Proligestone	23873-85-0	TWA	5 ug/m3 (OEB 4)	Internal
		Wipe limit	50 ug/100cm2	Internal
Polyethylene glycol	25322-68-3	TWA (aero- sol)	10 mg/m ³	US WEEL

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. Essentially no open handling permitted. Use closed processing systems or containment technologies. If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not exist, handle over lined trays or benchtops.

Personal protective equipment

Respiratory protection General and local exhaust ventilation is recommended to : maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided





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Hand	protection	hazardous che supplied respir release, expos	respirators against exposure to any mical is limited. Use a positive pressure air ator if there is any potential for uncontrolled ure levels are unknown, or any other where air purifying respirators may not provide action.
M	aterial	: Chemical-resis	tant gloves
	emarks protection	If the work env mists or aeros Wear a facesh	le gloving. asses with side shields or goggles. ironment or activity involves dusty conditions, ols, wear the appropriate goggles. ield or other full face protection if there is a rect contact to the face with dusts, mists, or
Skin a	and body protection	Additional bod task being per disposable sui	or laboratory coat. y garments should be used based upon the formed (e.g., sleevelets, apron, gauntlets, ts) to avoid exposed skin surfaces. The degowning techniques to remove potentially clothing.
Hygie	ene measures	: If exposure to eye flushing sy working place. When using do Wash contami The effective of engineering co appropriate de industrial hygie	chemical is likely during typical use, provide restems and safety showers close to the o not eat, drink or smoke. nated clothing before re-use. peration of a facility should include review of introls, proper personal protective equipment, gowning and decontamination procedures, ene monitoring, medical surveillance and the trative controls.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aqueous solution
Color	:	white to off-white
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available



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	Flamma	ability (solid, gas)	:	Not applicable	
	Flamma	ability (liquids)	:	No data available	
		explosion limit / Upper bility limit	:	No data available	
		explosion limit / Lower bility limit	:	No data available	
	Vapor p	pressure	:	No data available	•
	Relative	e vapor density	:	No data available	
	Relative	e density	:	No data available	
	Density		:	1.035 g/cm ³	
	Solubili Wate	ty(ies) er solubility	:	soluble	
	Solu	bility in other solvents	:	No data available	•
	Partition octanol	n coefficient: n-	:	Not applicable	
		ition temperature	:	No data available	•
	Decom	position temperature	:	No data available	•
	Viscosit Visc	ty osity, kinematic	:	No data available	
	Explosi	ve properties	:	Not explosive	
	Oxidizir	ng properties	:	The substance or	mixture is not classified as oxidizing.
	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-	:	Can react with strong oxidizing agents.
tions		
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes Inhalation Skin contact Ingestion Eye contact	of exposure	
Acute toxicity		
Not classified based on availa	ble information.	
Product:		
Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method	
Components:		
Proligestone:		
Acute oral toxicity	: LD50 (Mouse): 1,000 mg/kg	
Polyethylene glycol:		
Acute oral toxicity	: LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Remarks: Based on data from similar materials	
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials	
Skin corrosion/irritation		

Not classified based on available information.

Components:

Polyethylene glycol:

Species :	Rabbit
Method :	OECD Test Guideline 404
Result :	No skin irritation
Remarks :	Based on data from similar materials

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Polyethylene glycol:

Species :	Rabbit
Result :	No eye irritation
Method :	OECD Test Guideline 405
Remarks :	Based on data from similar materials





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Respi	ratory or skin	sensitizati	on	
Skin s	sensitization			
Not cl	assified based	on available	e information.	
	ratory sensiti assified based		e information.	
Comp	onents:			
Test T	s of exposure es t	l: : : :	Maximization Te Skin contact Guinea pig negative Based on data f	est rom similar materials
	cell mutagen assified based	•	information	
	onents:			
-	thylene glyco oxicity in vitro	:	Result: negative	erial reverse mutation assay (AMES) e d on data from similar materials
	nogenicity ected of causin	g cancer.		
Comp	onents:			
Prolig	jestone:			
	nogenicity - Ass	sess- :	Limited evidenc	e of carcinogenicity in animal studies
ment IARC				ent at levels greater than or equal to 0.1% is confirmed human carcinogen by IARC.
OSHA			f this product pres f regulated carcine	sent at levels greater than or equal to 0.1% is ogens.
NTP				ent at levels greater than or equal to 0.1% is d carcinogen by NTP.
-	oductive toxic	-		
	amage the unb	John Child.		
-	onents:			
-	jestone: s on fertility	:		lity te: Subcutaneous .: 10 mg/kg body weight



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ersion 11	Revision Date: 11/30/2023		lumber: 25-00013	Date of last issue: 09/30/2023 Date of first issue: 08/07/2018
		Re	sult: No effec	ets on fertility.
		Sp Ap Fe	rtility: LOAEL	te: Subcutaneous : 10 mg/kg body weight
		Re	sult: Postimp	lantation loss.
Repro sessn	oductive toxicity - As- nent		ly damage th tility.	e unborn child. Suspected of damaging
STOT	-single exposure			
Not cl	assified based on avai	lable info	rmation.	
STOT	-repeated exposure			
	ause damage to orgar eated exposure.	ns (Adren	al gland, Ova	ry, Uterus (including cervix)) through prolonge
Comp	oonents:			
Prolig	gestone:			
-	t Organs	: Ad	renal gland, (Ovary, Uterus (including cervix)
Asses	ssment		ly cause dam posure.	age to organs through prolonged or repeated
Repe	ated dose toxicity			
<u>Comp</u>	oonents:			
Prolig	gestone:			
Speci		: Do		
LOAE			mg/kg	
	cation Route sure time	: Su : 90	bcutaneous	
	t Organs		-	Jterus (including cervix), Ovary
Speci	es	: Ra	t	
LÒAE		: 50	mg/kg	
	cation Route		bcutaneous	
	sure time	: 90		
Targe	t Organs	: Ad	renal gland, l	Jterus (including cervix), Ovary
Aspir	ation toxicity			
-	assified based on avai	lable info	rmation.	
Expe	rience with human ex	posure		
Comp	oonents:			
Prolig	gestone:			
	ral Information	: Re	marks: Mav o	cause cancer based on animal data.
Inhala		: Sy	mptoms: Jau	ndice, Headache, Dizziness, menstrual irregu s in libido, bleeding, breast changes





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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	
Components:	
Proligestone:	
Toxicity to fish :	LC50 (Pimephales promelas (fathead minnow)): > 0.5 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: No toxicity at the limit of solubility.
Toxicity to daphnia and other : aquatic invertebrates	EC50 (Daphnia magna (Water flea)): > 0.5 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: No toxicity at the limit of solubility.
Toxicity to algae/aquatic : plants	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.
	NOEC (Pseudokirchneriella subcapitata (green algae)): 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.
Toxicity to microorganisms :	EC50: > 1,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 Remarks: No toxicity at the limit of solubility.
	NOEC: 1,000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 Remarks: No toxicity at the limit of solubility.
Polyethylene glycol:	
Toxicity to fish :	LC50 (Poecilia reticulata (guppy)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Persistence and degradability	
Components:	
Proligestone: Biodegradability :	Result: Not readily biodegradable.



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/ersion 2.11	Revision Date: 11/30/2023	SDS Number: 3068525-00013	Date of last issue: 09/30/2023 Date of first issue: 08/07/2018	
		Biodegradation Exposure time: Method: OECD		
Polye	thylene glycol:			
Biode	gradability	: Result: rapidly o Remarks: Base	degradable d on data from similar materials	
Bioad	cumulative potentia	I		
Com	oonents:			
Partiti	ethylene glycol: ion coefficient: n- ol/water	: log Pow: < 3		
Mobi	lity in soil			
No da	ata available			
Othe	r adverse effects			
No da	ata available			

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.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code Not regulated as a dangerous good

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Not applicable



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SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure)
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Water	7732-18-5
Proligestone	23873-85-0
Polyethylene glycol	25322-68-3
Sodium citrate, dihydrate	6132-04-3

California Prop. 65

WARNING: This product can expose you to chemicals including Proligestone, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances				
Proligestone		23873-85-0		
The ingredients of this p	roduct are reported in the following	j inventories:		
AICS	: not determined			
DSL	: not determined			
IECSC	: not determined			

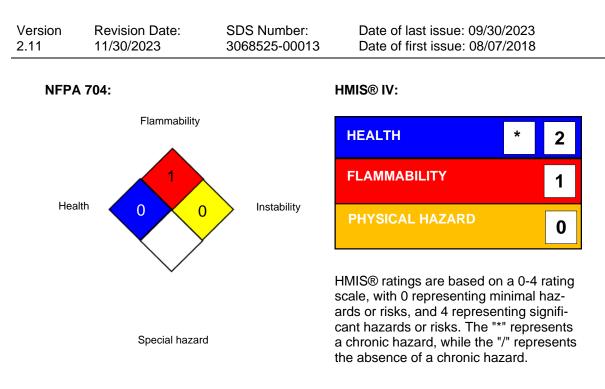
SECTION 16. OTHER INFORMATION

Further information



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Full text of other abbreviations

US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
US WEEL / TWA	:	8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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: HMIS - Hazardous Materials Identification System: 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance



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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

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/
Revision Date	:	11/30/2023

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.

US / Z8