



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.70

Section 1 - Product and Company Information

Product Name	Testosterone propionate	
Product Number	T1875	
Brand	Sigma Chemical	
Company	Sigma-Aldrich	
Street Address	3050 Spruce Street	
City, State, Zip, Country	SAINT LOUIS, MO 63103 US	
Technical Phone:	800-325-5832	Emergency Phone: 314-776-6555
Fax:	800-325-5052	

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
TESTOSTERONE 17-PROPIONATE	57-85-2	No	200-351-1	

Formula	C22H32O3
Synonyms	Agovirin, delta(sup 4)-Androstene-17-beta-propionate-3-one, Androst-4-en-3-one, 17-(1-oxopropoxy)-(17-beta)-, Andrusol-P, Androteston, Androtest P, Anertan, Aquaviron, Bietesticulina, Enamon, Homandren, neoHombreol, Hormoteston, Masenate, Nasdol, NSC 966, Okasa-Mascul, Orchiol, Orchistin, Oreton, Oreton propionate, Pantestin, Propiokan, Recthormone testosterone, Synandrol, Sterandryl, Synerone, Telipex, Testaform, Testex, Testodet, Vulvan, Testodrin, Testogen, Testonique, Testormol, Testosteron propionate, Testosterone-17-beta-propionate, Testoviron (ampule), Testoxyl, Testrex, Tostrin, TP, Uniteston

Section 3 - Hazards Identification

Emergency Overview

Toxic.
May cause cancer. Also harmful if swallowed. Possible risk of harm to the unborn child.
Calif. Prop. 65 reproductive hazard. Target organ(s): Liver. Reproductive system.

HMIS Rating

Health: 1* Flammability: 0 Reactivity: 0

NFPA Rating

Health: 1 Flammability: 0 Reactivity: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls

Use only in a chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment

Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

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Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash contaminated clothing before reuse.Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	
Physical State	
Solid	
Molecular Weight	344.5 AMU
pH	N/A
BP/BP Range	N/A
MP/MP Range	118 °C
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Optical Rotation	Degree of Rotation
	+102 - +86 (+/-3)
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents, Strong bases

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
May cause skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.
Eye Contact
May cause eye irritation.
Inhalation
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion
Harmful if swallowed.

Target Organ(s) or System(s)
Liver. Reproductive system.

Signs and Symptoms of Exposure
Causes anabolic and androgenic effects.Can cause masculinization, nitrogen and water retention, electrolyte imbalance, adverse reproductive effects, androgenic side effects pregnant females should avoid exposureExposure to testosterone and its esters during pregnancy causes masculinization of the fetus.

RTECS Number: XA3115000

Toxicity Data

Oral - Rat: 1000 mg/kg (LD50)
Intraperitoneal - Rat: 585 MG/KG (LD50)
Subcutaneous - Rat: >5 GM/KG (LD50)
Oral - Mouse: 1350 mg/kg (LD50)
Intraperitoneal - Mouse: 970 MG/KG (LD50)
Subcutaneous - Mouse: >5 GM/KG (LD50)

Chronic Exposure- Carcinogen

Result: This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Rat - Subcutaneous: 10 MG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors.

Rat - Implant: 432 MG/KG 48W C
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.Tumorigenic Effects: Prostate tumors.

Mouse - Implant: 5200 MG/KG 65W I
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.Lungs, Thorax, or Respiration:Tumors.Tumorigenic Effects: Uterine tumors

Hamster - Implant: 360 MG/KG
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Musculoskeletal:Tumors. Tumorigenic Effects: Other reproductive system tumors.

Chronic Exposure- Teratogen

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Result:Possible risk of congenital malformation in the fetus.			
Rat	100 MG/KG	Oral	(17-20D PREG)
Result:Specific Developmental Abnormalities: Urogenital system.			
Rat	25 MG/KG	Oral	(16-20D PREG)
Result:Specific Developmental Abnormalities: Urogenital system.			

Rat	7500 UG/KG	Subcutaneous	(17D PREG)
Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Delayed effects.			
Rat	6250 UG/KG	Subcutaneous	(15D PREG)
Result: Specific Developmental Abnormalities: Skin and skin appendages.			
Rat	6250 UG/KG	Subcutaneous	(MULTIGENERATION S)
Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Rat	3600 UG/KG	Intramuscular	(9-14D PREG)
Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).			
Rat	3600 UG/KG	Intramuscular	(9-14D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Mouse	200 MG/KG	Subcutaneous	(12D PREG)
Result: Specific Developmental Abnormalities: Skin and skin appendages.			
Mouse	15 MG/KG	Intramuscular	(7-12D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Mouse	240 MG/KG	Intramuscular	(7-12D PREG)
Result: Specific Developmental Abnormalities: Eye, ear.			
Pig	142 MG/KG	Intramuscular	(40-77D PREG)
Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Delayed effects.			
Guinea pig	98 MG/KG	Parenteral	(24-68D PREG)
Result: Specific Developmental Abnormalities: Urogenital system. Effects on Newborn: Delayed effects.			
Cattle, Horse	5500 UG/KG	Subcutaneous	(40-60D PREG)
Result: Specific Developmental Abnormalities: Urogenital system.			
Domestic Animals	693 MG/KG	Subcutaneous	(40-60D PREG)
Result: Specific Developmental Abnormalities: Endocrine system. Effects on Newborn: Biochemical and metabolic.			

Chronic Exposure- Mutagen

Species	Dose	Cell Type	Mutation test
Rat	300 UMO/L	liver	DNA damage
Rat	10 MG/KG	Subcutaneous	sperm
Hamster	1 MG/L	Embryo	Morphological transformation.

Chronic Exposure- Reproductive Hazard

Species	Dose	Route of Application	Exposure Time
Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.			
Man	10714 UG/KG	Intramuscular	(30D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Man	4286 UG/KG	Intramuscular	(14D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Woman	3 MG/KG	Intramuscular	(6D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders.			
Man	8570 UG/KG	Parenteral	(24D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.			
Woman	18500 UG/KG	Parenteral	(31D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Other measures of fertility			
Rat	4550 MG/KG	Intraperitoneal	(26W MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.			
Rat	4550 MG/KG	Intraperitoneal	(26W PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Uterus, cervix, vagina.			
Rat	50 UG/KG	Subcutaneous	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Uterus, cervix, vagina.			

Rat	200 UG/KG	Subcutaneous	(20D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.			
Rat	50 UG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Rat	50 UG/KG	Subcutaneous	(1D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles). Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).			
Rat	6250 UG/KG	Intramuscular	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Rat	1200 UG/KG	Intramuscular	(9-14D PREG)
Result: Effects on Fertility: Litter size (e.g., # fetuses per litter; measured before birth). Specific Developmental Abnormalities: Musculoskeletal system. Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Rat	50 UG/KG	Intramuscular	(1D PRE)
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).			
Rat	10 UG/KG	Intracerebral	(77D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Menstrual cycle changes or disorders. Maternal Effects: Other effects.			
Rat	15 MG/KG	Parenteral	(15-20D PREG)
Result: Effects on Newborn: Behavioral.			
Rat	250 UG/KG	Parenteral	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Effects on Fertility: Other measures of fertility			
Rat	500 UG/KG	Parenteral	(1D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Rat	92 MG/KG	Parenteral	(23D MALE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Rat	10 UG/KG	Implant	(77D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes. Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Menstrual cycle changes or disorders.			
Rat	30 UG/KG	Implant	(77D PRE)
Result: Maternal Effects: Other effects.			
Rat	20 MG/KG	Unreported	(5D MALE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Rat	3500 MG/KG	Unreported	(10-16D PREG)
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Postimplantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death.			
Rat	52500 UG/KG	Multiple	(15D PRE)
Result: Maternal Effects: Other effects.			
Mouse	4 MG/KG	Subcutaneous	(1D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct. Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Mouse	40 MG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).			
Mouse	20 MG/KG	Subcutaneous	(10D PRE)
Result: Maternal Effects: Other effects.			
Mouse	190 MG/KG	Subcutaneous	(35D MALE)
Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.			
Mouse	15 MG/KG	Intramuscular	(7-12D PREG)
Result: Effects on Fertility: Litter size (e.g., # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Mouse	2 MG/KG	Intracerebral	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Mouse	2 MG/KG	Intracerebral	(1D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Dog	30 MG/KG	Intramuscular	(60D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.			
Monkey	30 MG/KG	Subcutaneous	(40-64D PREG)
Result: Effects on Newborn: Biochemical and metabolic.			
Rabbit	24500 UG/KG	Oral	(49D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).			

Rabbit	1500 UG/KG	Subcutaneous	(27-29D PREG)
Result: Maternal Effects: Postpartum.Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Abortion.			
Rabbit	10 MG/KG	Subcutaneous	(5D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Rabbit	500 UG/KG	Subcutaneous	(1D MALE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Rabbit	15750 UG/KG	Intramuscular	(21D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Pig	140 MG/KG	Intramuscular	(29-35D PREG)
Result: Maternal Effects: Menstrual cycle changes or disorders.			
Pig	140 MG/KG	Intramuscular	(39-45D PREG)
Result: Maternal Effects: Menstrual cycle changes or disorders.			
Guinea pig	80 MG/KG	Subcutaneous	(30-45D PREG)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles). Maternal Effects: Menstrual cycle changes or disorders. Specific Developmental Abnormalities: Urogenital system.			
Guinea pig	150 MG/KG	Subcutaneous	(28-58D PREG)
Result: Effects on Newborn: Delayed effects.			
Guinea pig	110 MG/KG	Intramuscular	(50D PRE)
Result: Maternal Effects: Other effects. Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).			
Horse, donkey	1575 UG/KG	Subcutaneous	(9D MALE)
Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.			
Domestic Animals	3045 UG/KG	Implant	(40-60D PREG)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain) Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Physical.			

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Contact the Drug Enforcement Administration concerning the disposal of controlled substances.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None

Non-Hazardous for Transport This substance is considered to be nonhazardous for transport.

IATA

Non-Hazardous for Air Transport Non-hazardous for air transport.

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: T

Indication of Danger

Toxic.

Risk Statements

R: 45 63

May cause cancer. Possible risk of harm to the unborn child.

Safety Statements

S: 53 36/37 45

Avoid exposure - obtain special instructions before use. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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US Classification and Label Text

Indication of Danger

Toxic.

Risk Statements

May cause cancer. Also harmful if swallowed. Possible risk of harm to the unborn child.

Safety Statements

Avoid exposure - obtain special instructions before use. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Calif. Prop. 65 reproductive hazard. Target organ(s): Liver. Reproductive system.

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

United States - State Regulatory Information

California Prop - 65

This product is or contains chemical(s) known to the state of California to cause male reproductive toxicity. This product is or contains chemical(s) known to the state of California to cause female reproductive toxicity. This product is or contains chemical(s) known to the state of California to cause cancer.

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: Yes

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SigmaAldrich Inc., shall not be held liable for any damage resulting from handling or form contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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