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SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 01/21/2008
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Version 1.50

Section 1 - Product and Company Information

Product Name: 5alpha-Androstan-17beta-ol-3-one
Product Number: A8380
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
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Table with 5 columns: Substance Name, CAS #, SARA 313, EC no, Annex I Index Number. Row 1: 5A-ANDROSTAN-17B-OL-3-ONE, 521-18-6, No, 208-307-3

Formula: C19H30O2
Synonyms: Anaboleen, Anabolex, Androlone, Androstanolone, 5alpha-Androstan-17-beta-ol-3-one, Androstan-3-one, 17-hydroxy-, (5-alpha,17-beta)- (9CI), Cristerona MB, DHT, Dihydrotestosterone, 4-Dihydrotestosterone, 5-alpha-Dihydrotestosterone, 4,5-alpha-Dihydrotestosterone, 17-beta-Hydroxy-5-alpha-androstan-3-one, (5-alpha,17-beta)-17-Hydroxyandrostan-3-one, Neodrol, Proteina, Protona, Stanaprol, Stanolone

Section 3 - Hazards Identification

Emergency Overview: Harmful. Limited evidence of a carcinogenic effect. Possible Carcinogen (US). Target organ(s): Reproductive system. Calif. Prop. 65 carcinogen.

HMS 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.
Environmental Precaution(s): Avoid contaminating water supply. Avoid contaminating sewers and waterways with this material.

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 fullface 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.

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** 290.45 AMU

pH N/A
BP/BP Range N/A
MP/MP Range 179 °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 +41 - +33 (+/-1)
Solubility N/A

Solvent: CHCl₃ 10 g/l

N/A = not available

Section 10 - Stability and Reactivity**Stability****Stable**

Stable.

Materials to Avoid

Strong oxidizing agents

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

May be harmful if swallowed.

Target Organ(s) or System(s)

Reproductive system.

 RTECS Number: BV8052000**Chronic Exposure - Carcinogen**

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

Chronic Exposure - Teratogen

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
			Result: May cause congenital malformation in the fetus.
Rat	160 MG/KG	Subcutaneous	(14-21D PREG)
			Result: Specific Developmental Abnormalities: Urogenital system.
Rat	80 MG/KG	Intramuscular	(13-20D PREG)
			Result: Specific Developmental Abnormalities: Skin and skin appendages.
			Specific Developmental Abnormalities: Urogenital system.
Mouse	2 GM/KG	Subcutaneous	(14D PREG)
			Result: Specific Developmental Abnormalities: Skin and skin appendages.

Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
			Result: May cause reproductive disorders.
Rat	17500 UG/KG	Subcutaneous	(35D PRE)
			Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).
Rat	1400 UG/KG	Subcutaneous	(14D PRE)
			Result: Maternal Effects: Uterus, cervix, vagina. Effects on Fertility: Other measures of fertility
Rat	700 UG/KG	Subcutaneous	(14D PRE)
			Result: Maternal Effects: Ovaries, fallopian tubes.
Rat	2500 UG/KG	Parenteral	(10D PRE)
			Result: Maternal Effects: Ovaries, fallopian tubes.
Rat	168 MG/KG	Parenteral	(1D MALE)
			Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.
Rat	24 MG/KG	Implant	(42D MALE)
			Result: Paternal Effects: Testes, epididymis, sperm duct. Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females) Effects on Fertility: Litter size (e.g., # fetuses per litter measured before birth).
Rat	150 MG/KG	Unreported	(30D PRE)
			Result: Maternal Effects: Uterus, cervix, vagina.
Mouse	40 MG/KG	Subcutaneous	(1D PRE)
			Result: Maternal Effects: Ovaries, fallopian tubes. Effects on Fertility: Litter size (e.g., # fetuses per litter; measured before birth). Effects on Fertility: Other measures of fertility
Mouse	40 MG/KG	Subcutaneous	(10D PRE)
			Result: Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Other effects.

Mouse	24 MG/KG	Subcutaneous	(3D PREG)
Result: Maternal Effects: Uterus, cervix, vagina.			
Monkey	200 UG/KG	Intramuscular	(20D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Monkey	14 MG/KG	Intramuscular	(70D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).			
Monkey	3420 UG/KG	Implant	(90D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.			
Rabbit	30 MG/KG	Subcutaneous	(1-3D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			
Rabbit	1500 UG/KG	Unreported	(1-3D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			

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: Xn

Indication of Danger

Harmful.

Risk Statements R: 40

Limited evidence of a carcinogenic effect.

Safety Statements S: 36/37/39 45

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 Classification and Label Text

Indication of Danger

Harmful.

Risk Statements

Limited evidence of a carcinogenic effect.

Safety Statements

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

Possible Carcinogen (US). Target organ(s): Reproductive system. Calif. Prop. 65 carcinogen.

United States Regulatory Information

SARA Listed: No

United States - State Regulatory Information

California Prop - 65

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: No

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 from contact with the above product. See reverse side of invoice tracking slip for additional terms and conditions of sale. Copyright2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.