



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 06/09/2006  
Date Updated: 01/30/2006  
Version 1.60

### Section 1 - Product and Company Information

**Product Name** Progesterone, minimum 99%  
**Product Number** P0130  
**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

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
PROGESTERONE	57-83-0	No	200-350-6	

**Formula** C21H30O2  
**Synonyms** Agolutin, Bio-luton, Cortutin, Corlutina, Corlutite, Corporin, Corpus luteum hormone, delta(sup 4)-Pregnene-3,20-dione, Flavolutan, Fologenon, Gesterol 100, Gestone, Gestomone, Glanducorpin, Gynlutin, Gynoluton, Hormoflavine, Hormoluton, Lingusorbs, Lipo-lutin, Lucorteum Sol, Luteal hormone, Luteinique, Luteodyn, Luteogan, Luteohormone, Luteol, Luteosan, Luteostab, Luteovis, Lutex, Lutidon, Lutocyclin, Lutocyclin M, Lutocyllin, Lutoform, Lutogyl, Lutren, Lutromone, Nalutron, NSC-9704, Percutacrine Luteinique, Piaponon, Pregn-4-ene-3,20-dione (9CI), 4-Pregnene-3,20-dione, Primolut, Progekan, Progestasert, Progesterol, beta-Progesterone, Progesteronum, Progestin, Progestone, Prolidon, Prolutone, Syngesterone, Syngestrets, Synovex S, Syntolutan

### Section 3 - Hazards Identification

#### Emergency Overview

Harmful.  
Limited evidence of a carcinogenic effect.  
Possible Carcinogen (US). Calif. Prop. 65 carcinogen. Photosensitizer. Target organ(s): Central nervous system. Male reproductive system.

**HMIS Rating**  
Health: 3\*      Flammability: 0      Reactivity: 1

**NFPA Rating**  
Health: 3      Flammability: 0      Reactivity: 1

\*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. Shut off all sources of ignition.

#### 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)

Do not allow material to enter drains or water courses. 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.

96-06  
MCM

**Storage****Suitable**

Keep tightly closed.

**Special Requirements**

Light sensitive.

**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.

**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:** 314.47 AMU

pH N/A  
BP/BP Range N/A  
MP/MP Range 128 °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:  
+230 - +190 (+/-4)

Solvent: EtOH10 g/l

**Solubility****Solubility in Water:** Insoluble.**Solvent:** Soluble.**Other Solvents:** ALCOHOL, ACETONE, DIOXANE.

N/A = not available

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

Stable.

**Conditions of Instability**

Light sensitive.

**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.

**Sensitization****Sensitization**

Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions, or bullae

**Target Organ(s) or System(s)**

Female reproductive system. Male reproductive system. Central nervous system. Liver.

**Signs and Symptoms of Exposure**

Causes anabolic and androgenic effects. Exposure can cause liver disturbances, jaundice, nausea, vomiting, chills, diarrhea, abdominal fullness, excitation, insomnia, confusion, acne, blood lipid changes, increased serum cholesterol, retention of sodium, chloride, water, potassium, phosphates, calcium and nitrogen, oedema, increased vascularity of the skin, and growth of the bones. In women, exposure can result in the suppression of ovarian activity and menstruation. Continued exposure can produce hirsutism, hoarseness or deepening of the voice, and atrophy of the breasts and endometrial tissue. In men, exposure may suppress spermatogenesis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** TW0175000**Toxicity Data**

Oral - Rat: 5,000 mg/kg(LD50)

Intraperitoneal - Rat: 327 MG/KG (LD50)

**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.

Mouse - Subcutaneous: 40 MG/KG

Result: Tumorigenic: Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors.

Mouse - Parenteral: 1289 MG/KG 78W C

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic Effects: Ovarian tumors. Tumorigenic Effects: Uterine tumors

Mouse - Implant: 1296 MG/KG 77W C

Result: Tumorigenic: Neoplastic by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

Dog - Intramuscular: 26643 MG/KG 4Y I

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.

Dog - Implant: 270 MG/KG 78W

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors.

Mouse - Subcutaneous: 9500 MG/KG 19W I

Result: Tumorigenic: Neoplastic by RTECS criteria. Skin and Appendages: Other: Tumors.

Mouse - Subcutaneous: 200 MG/KG 5W I

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Blood: Leukemia

Mouse - Implant: 1300 MG/KG 78W I

Result: Tumorigenic: Neoplastic by RTECS criteria. Tumorigenic Effects: Ovarian tumors.

Mouse - Implant: 2592 MG/KG 77W C

Result: Tumorigenic: Neoplastic by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

Mouse - Implant: 14 GM/KG 77W C

Result: Tumorigenic: Neoplastic by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

Mouse - Implant: 648 MG/KG 77W C

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

Mouse - Implant: 216 MG/KG 77W C

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

Mouse - Implant: 19 GM/KG 77W C

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Increased incidence of tumors in susceptible strains.

**IARC Carcinogen List**

Rating  
Group 2B

**NTP Carcinogen List**

Rating  
Anticipated to be a carcinogen.

**Chronic Exposure - Teratogen**

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
	Result: Laboratory experiments have shown teratogenic effects.		
Woman	113 MG/KG	Oral	(6-32W PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		
Woman	600 UG/KG	Parenteral	(67-71D PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		
Woman	386 MG/KG	Unreported	(18-34W PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		
Rat	420 MG/KG	Subcutaneous	(15-17D PREG)
	Result: Effects on Embryo or Fetus: Fetal death.		
Rat	9 MG/KG	Subcutaneous	(15-20D PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		

Rat	4 MG/KG	Subcutaneous	(9D PREG)
	Result: Specific Developmental Abnormalities: Central nervous system.		
Rat	30 MG/KG	Intramuscular	(1-6D PREG)
	Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).		
Rat	35 MG/KG	Intramuscular	(14-20D PREG)
	Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).		
Rat	36300 UG/KG	Parenteral	(7-17D PREG)
	Result: Specific Developmental Abnormalities: Central nervous system. Effects on Newborn: Biochemical and metabolic.		
Rat	60 UG/KG	Parenteral	(16-19D PREG)
	Result: Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).		
Pig	18333 UG/KG	Intramuscular	(15-25D PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		
Guinea pig	86 MG/KG	Subcutaneous	(18-60D PREG)
	Result: Specific Developmental Abnormalities: Urogenital system.		

**Chronic Exposure - Mutagen**

<u>Species</u>	<u>Dose</u>		<u>Cell Type</u>	<u>Mutation test</u>
Human	5 UMOL/L		lymphocyte	DNA inhibition
Human	100 UG/L		kidney	DNA inhibition
Human	100 UG/L		kidney	Cytogenetic analysis
Human	20 MG/L		lymphocyte	Sister chromatid exchange
Rat	100 MG/KG	Oral		Micronucleus test
Rat	2600 UG/L		Embryo	Morphological transformation.
Mouse	80 UG/L		fibroblast	Morphological transformation.
Mouse	1060 MG/KG	Oral		DNA damage
Mouse	200 MG/KG	Subcutaneous		Unscheduled DNA synthesis
Mouse	200 MG/KG	Subcutaneous		DNA inhibition
Mouse	1 MG/L		Embryo	Cytogenetic analysis
Hamster	30 MG/L		Embryo	Morphological transformation.
Rabbit	100 UG/KG	Intravenous		DNA damage
Dog	100 UG/KG	Intraarterial		Cytogenetic analysis

**Chronic Exposure - Reproductive Hazard**

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
	Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.		
Woman	200 MG/KG	Oral	(20D PRE)
	Result: Maternal Effects: Uterus, cervix, vagina.		
Woman	120 MG/KG	Oral	(20D PRE)
	Result: Effects on Fertility: Other measures of fertility		
Woman	100 MG/KG	Oral	(20D PRE)
	Result: Maternal Effects: Uterus, cervix, vagina.		
Woman	120 MG/KG	Oral	(20D PRE)
	Result: Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Other measures of fertility		
Man	50 MG/KG	Intramuscular	(70D MALE)
	Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Breast development.		
Man	15 MG/KG	Intramuscular	(21D MALE)
	Result: Paternal Effects: Impotence.		
Woman	32 MG/KG	Parenteral	(3W PRE)
	Result: Maternal Effects: Menstrual cycle changes or disorders.		
Woman	210 MG/KG	Intravaginal	(3W PRE)
	Result: Maternal Effects: Menstrual cycle changes or disorders.		
Woman	475 UG/KG	Intravaginal	(1Y PRE)
	Result: Maternal Effects: Menstrual cycle changes or disorders.		
Rat	25 MG/KG	Oral	(1D PRE)
	Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).		
Rat	180 MG/KG	Oral	(9D MALE)
	Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.		

Rat	50 MG/KG	Oral	(1D PRE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Rat	700 MG/KG	Oral	(14D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Rat	240 MG/KG	Skin	(30D MALE)
Result: Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.			
Rat	7 MG/KG	Subcutaneous	(10-16D PREG)
Result: Effects on Fertility: Abortion.			
Rat	188 MG/KG	Subcutaneous	(30D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders.			
Rat	1 MG/KG	Subcutaneous	(9D PREG)
Result: Effects on Newborn: Behavioral.			
Rat	500 UG/KG	Subcutaneous	(2D PRE)
Result: Effects on Fertility: Other measures of fertility			
Rat	20 MG/KG	Subcutaneous	(23D PREG)
Result: Maternal Effects: Parturition. Maternal Effects: Postpartum. Effects on Newborn: Growth statistics (e.g., reduced weight gain).			
Rat	110 MG/KG	Intramuscular	(1-22D PREG)
Result: Effects on Newborn: Delayed effects.			
Rat	900 UG/KG	Intramuscular	(6-14D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Rat	200 MG/KG	Intramuscular	(48D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands. Paternal Effects: Other effects on male.			
Rat	250 UG/KG	Intracerebral	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Rat	8750 UG/KG	Parenteral	(7D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Rat	250 UG/KG	Implant	(2D POST)
Result: Maternal Effects: Postpartum.			
Rat	30 MG/KG	Implant	(24D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Rat	100 MG/KG	Unreported	(20-24D PREG)
Result: Maternal Effects: Parturition.			
Mouse	240 MG/KG	Subcutaneous	(14-16D PREG)
Result: Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Delayed effects.			
Mouse	100 MG/KG	Subcutaneous	(1D PREG)
Result: Effects on Fertility: Other measures of fertility			
Mouse	20 MG/KG	Subcutaneous	(6-9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Mouse	1500 UG/KG	Subcutaneous	(3D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Mouse	2400 MG/KG	Subcutaneous	(20D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.			
Mouse	3 GM/KG	Implant	(5D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Mouse	10 MG/KG	Unreported	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Dog	16 MG/KG	Subcutaneous	(5D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Dog	360 MG/KG	Implant	(34W PRE)
Result: Effects on Fertility: Other measures of fertility			
Dog	600 MG/KG	Implant	(60W PRE)
Result: Maternal Effects: Breasts, lactation (prior to or during pregnancy).			
Monkey	30 UG/KG/30M	Inhalation	(60D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct.			
Monkey	4 UG/KG	Inhalation	(10D PRE)
Result: Effects on Fertility: Other measures of fertility			
Monkey	900 UG/KG	Subcutaneous	(9D PRE)
Result: Effects on Fertility: Other measures of fertility			
Monkey	12 MG/KG	Intramuscular	(8D PRE)
Result: Effects on Fertility: Other measures of fertility			
Monkey	85410 UG/KG	Intravaginal	(52W PRE)
Result: Maternal Effects: Uterus, cervix, vagina. Effects on Fertility: Other measures of fertility			

Monkey	17155 UG/KG	Intravaginal	(52W PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Rabbit	1 MG/KG	Oral	(1D PRE/1D PREG)
Result: Effects on Fertility: Other measures of fertility			
Rabbit	100 MG/KG	Oral	(1D PRE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles). Effects on Fertility: Other measures of fertility			
Rabbit	500 UG/KG	Skin	(1D PRE)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			
Rabbit	1 MG/KG	Skin	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Rabbit	50 UG/KG	Subcutaneous	(5D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Rabbit	50 UG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Rabbit	70 MG/KG	Subcutaneous	(14D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Other effects on male.			
Rabbit	300 UG/KG	Subcutaneous	(2D PRE/1D 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	100 UG/KG	Subcutaneous	(1D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Rabbit	150 UG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Rabbit	8 MG/KG	Intramuscular	(2-9D 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	8 MG/KG	Intramuscular	(25-32D PREG)
Result: Maternal Effects: Postpartum.			
Rabbit	2500 MG/KG	Intramuscular	(2D PRE)
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Specific Developmental Abnormalities: Other developmental abnormalities.			
Rabbit	120 UG/KG	Unreported	(6-29D PREG)
Result: Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).			
Rabbit	684 UG/KG	Intrauterine	(14D PRE/1-10D 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	105 UG/KG	Intrauterine	(21D PRE)
Result: Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).			
Rabbit	260 UG/KG	Intrauterine	(21D PRE/1-31D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).			
Pig	2250 UG/KG	Subcutaneous	(1-5D PREG)
Result: Effects on Fertility: Other measures of fertility			
Pig	40 MG/KG	Subcutaneous	(16D PRE)
Result: Maternal Effects: Ovaries, fallopian tubes.			
Pig	1667 UG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Pig	5833 UG/KG	Parenteral	(14D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders.			
Guinea pig	1480 MG/KG	Intramuscular	(70D 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).			
Hamster	240 UG/KG	Subcutaneous	(1D PRE)
Result: Effects on Fertility: Other measures of fertility			
Hamster	2 MG/KG	Subcutaneous	(1D PRE)
Result: Maternal Effects: Uterus, cervix, vagina.			
Hamster	80 MG/KG	Subcutaneous	(1D PREG)
Result: Maternal Effects: Parturition. Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).			

Hamster	32 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).			
Hamster	2400 UG/KG	Parenteral	(3D PRE)
Result: Effects on Fertility: Mating performance (e.g., # sperm positive females per # females mated; # copulations per # estrus cycles).			
Cattle, Horse	3 MG/KG	Subcutaneous	(30D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Other effects on male.			
Domestic Animals	1273 UG/KG	Subcutaneous	(14D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Other measures of fertility			
Domestic Animals	2545 UG/KG	Intramuscular	(7D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders. Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated).			
Cattle, Horse	1700 UG/KG	Intramuscular	(39-41W PREG)
Result: Maternal Effects: Parturition.			
Horse, donkey	16667 UG/KG	Parenteral	(45-47W PREG)
Result: Maternal Effects: Parturition.			

### Section 12 - Ecological Information

No data available.

### Section 13 - Disposal Considerations

#### Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. (DN) Requires special label: "Contains a substance which is regulated by Danish work environmental law due to the risk of carcinogenic properties."

### Section 14 - Transport Information

#### DOT

**Proper Shipping Name:** None

**Non-Hazardous for Transport:** This substance is considered to be non-hazardous 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

Wear suitable protective clothing and gloves.

#### US Classification and Label Text

**Indication of Danger**

Harmful.

**Risk Statements**

Limited evidence of a carcinogenic effect.

**Safety Statements**

Wear suitable protective clothing and gloves.

#### US Statements

Possible Carcinogen (US). Calif. Prop. 65 carcinogen. Photosensitizer. Target organ(s): Central nervous system. Male 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 cancer. 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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.