

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

078946868

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

078946908

**Trenbolone / Estradiol LA Formulation**

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
Date of first issue: 10/28/2014

---

**SECTION 1. IDENTIFICATION**

Product name : Trenbolone / Estradiol LA Formulation

**Manufacturer or supplier's details**

Company name of supplier : Merck & Co., Inc  
Address : 2000 Galloping Hill Road  
Kenilworth - New Jersey - U.S.A. 07033  
Telephone : 908-740-4000  
Telefax : 908-735-1496  
Emergency telephone : 1-908-423-6000  
E-mail address : EHSDATASTEWARD@merck.com

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

Recommended use : Veterinary product

---

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200**

Combustible dust

Carcinogenicity : Category 1A

Reproductive toxicity : Category 1A

Specific target organ toxicity : Category 1 (Liver, Bone, Blood, Endocrine system)  
- repeated exposure

Specific target organ toxicity : Category 1 (Endocrine system, Blood)  
- repeated exposure (Oral)

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.  
H350 May cause cancer.  
H360FD May damage fertility. May damage the unborn child.  
H372 Causes damage to organs (Liver, Bone, Blood, Endocrine system) through prolonged or repeated exposure.  
H372 Causes damage to organs (Endocrine system, Blood) through prolonged or repeated exposure if swallowed.

Precautionary Statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.

## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

P260 Do not breathe dust.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

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

**Storage:**

P405 Store locked up.

**Disposal:**

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

**Other hazards**

Dust contact with the eyes can lead to mechanical irritation.  
 Contact with dust can cause mechanical irritation or drying of the skin.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate	10161-34-9	$\geq 50$ - $< 70$
Estradiol	50-28-2	$\geq 5$ - $< 10$
Magnesium stearate	557-04-0	$\geq 1$ - $< 5$

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 contact, immediately flush skin with soap and plenty of water.  
 Remove contaminated clothing and shoes.  
 Get medical attention.  
 Wash clothing before reuse.  
 Thoroughly clean shoes before reuse.

In case of eye contact : If in eyes, rinse well with water.  
 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 : May cause cancer.

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

and effects, both acute and delayed		May damage fertility. May damage the unborn child. Causes damage to organs through prolonged or repeated exposure. Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation.
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.

### SECTION 5. FIRE-FIGHTING 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	:	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides Metal oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances 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, protective equipment and emergency procedures	:	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. 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	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

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 : Static electricity may accumulate and ignite suspended dust causing an explosion.  
 Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
 Do not breathe dust.  
 Do not swallow.  
 Avoid contact with eyes.  
 Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
 Keep container tightly closed.  
 Minimize dust generation and accumulation.  
 Keep container closed when not in use.  
 Keep away from heat and sources of ignition.  
 Take precautionary measures against static discharges.  
 Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.  
 Store locked up.  
 Keep tightly closed.  
 Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
 Strong oxidizing agents  
 Organic peroxides  
 Explosives  
 Gases

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate	10161-34-9	TWA	0.2 $\mu\text{g}/\text{m}^3$ (OEB 5)	Internal
		Wipe limit	2 $\mu\text{g}/100 \text{ cm}^2$	Internal
Estradiol	50-28-2	TWA	0.05 $\mu\text{g}/\text{m}^3$ (OEB 5)	Internal
Further information: Skin				
		Wipe limit	0.5 $\mu\text{g}/100 \text{ cm}^2$	Internal

# SAFETY DATA SHEET



## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

Magnesium stearate	557-04-0	TWA (Inhalable fraction)	10 mg/m <sup>3</sup>	ACGIH
		TWA (Respirable fraction)	3 mg/m <sup>3</sup>	ACGIH

**Engineering measures** : Minimize workplace exposure concentrations. Apply measures to prevent dust explosions. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). If sufficient ventilation is unavailable, use with local exhaust ventilation. Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m<sup>3</sup> - total dust, 5 mg/m<sup>3</sup> - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m<sup>3</sup> - respirable particles, 10 mg/m<sup>3</sup> - inhalable particles.

### 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 by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

### Hand protection

**Material** : Chemical-resistant gloves

**Remarks** : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

**Eye protection** : Wear the following personal protective equipment:  
Safety goggles

**Skin and body protection** : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

**Trenbolone / Estradiol LA Formulation**

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
Date of first issue: 10/28/2014

---

Hygiene measures : Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).  
: 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.

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : powder

Color : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : May form explosive dust-air mixture during processing, handling or other means.

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

**Trenbolone / Estradiol LA Formulation**

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
Date of first issue: 10/28/2014

---

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Molecular weight : No data available

Particle size : No data available

---

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : May form explosive dust-air mixture during processing, handling or other means.  
Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.  
Avoid dust formation.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

---

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method

**Components:****17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
LD50 (Mouse): 2,700 mg/kg

**Estradiol:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Acute toxicity (other routes of : LD50 (Rat): > 300 mg/kg

---



## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
Date of first issue: 10/28/2014

---

administration)      Application Route: Subcutaneous

**Magnesium stearate:**

Acute oral toxicity      :    LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity      :    LD50 (Rabbit): > 2,000 mg/kg  
Remarks: Based on data from similar materials

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****Magnesium stearate:**

Species      :    Rabbit  
Result      :    No skin irritation  
Remarks    :    Based on data from similar materials

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Estradiol:**

Result      :    No eye irritation

**Magnesium stearate:**

Species      :    Rabbit  
Result      :    No eye irritation  
Remarks    :    Based on data from similar materials

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Components:****Estradiol:**

Routes of exposure      :    Skin contact  
Species      :    Guinea pig  
Assessment      :    Does not cause skin sensitization.  
Result      :    negative

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

### Magnesium stearate:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES)
		Test system: Salmonella typhimurium
		Result: negative
		Test Type: Micronucleus test
		Test system: Chinese hamster fibroblasts
		Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test
		Species: Mouse
		Result: negative
		Test Type: Micronucleus test
		Species: Rat
		Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

### Estradiol:

Genotoxicity in vitro	:	Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
		Test system: mammalian cells
		Result: positive
		Test Type: Chromosome aberration test in vitro
		Test system: mammalian cells
		Result: positive
		Test Type: Chromosomal aberration
		Test system: mammalian cells
		Result: positive
Genotoxicity in vivo	:	Test Type: Chromosomal aberration
		Species: Rat
		Cell type: Bone marrow
		Result: negative
		Test Type: Chromosomal aberration
		Species: Mouse

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

Cell type: Bone marrow  
Result: negative

### Magnesium stearate:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative  
Remarks: Based on data from similar materials

Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: Based on data from similar materials

### Carcinogenicity

May cause cancer.

### Components:

#### 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:

Species : Mouse, male and female  
Application Route : Oral  
Result : positive  
Target Organs : Liver

Species : Rat, male and female  
Application Route : Oral  
Result : positive  
Target Organs : Pancreas

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

#### Estradiol:

Species : Mouse  
Application Route : Ingestion  
Exposure time : 24 Months  
LOAEL : 100  $\mu$ g/kg  
Result : positive  
Target Organs : female reproductive organs

Species : Rat  
Application Route : Subcutaneous  
Exposure time : 13 weeks  
LOAEL : 20 mg/kg body weight  
Result : positive  
Target Organs : Endocrine system

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** Known to be human carcinogen  
Estradiol 50-28-2  
(Estrogens, Steroidal)

### Reproductive toxicity

May damage fertility. May damage the unborn child.

#### Components:

##### **17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Effects on fertility : Test Type: Two-generation study  
Species: Rat  
Application Route: Oral  
Fertility: LOAEL: 0.18 mg/kg body weight  
Result: Postimplantation loss.

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Rat  
Application Route: oral (feed)  
Developmental Toxicity: LOAEL: 20 mg/kg body weight  
Result: Malformations were observed.

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

##### **Estradiol:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Fertility: LOAEL: 0.5 mg/kg body weight  
Result: Effects on fertility.

Test Type: One-generation reproduction toxicity study  
Species: Rat  
Duration of Single Treatment: 90 d  
Fertility: LOAEL: 0.69 mg/kg body weight  
Result: Effects on fertility.

Test Type: Two-generation study  
Species: Mouse  
Application Route: Oral  
Fertility: LOAEL: 0.1 mg/kg body weight  
Result: Effects on fertility.

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Mouse, female  
Application Route: Subcutaneous

## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

Teratogenicity: LOAEL: 4 mg/kg body weight  
 Symptoms: Malformations were observed.  
 Result: positive, Teratogenic effects.

Test Type: One-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Subcutaneous  
 Teratogenicity: LOAEL: 2.5 µg/kg body weight  
 Symptoms: Reduced body weight  
 Result: positive, Embryotoxic effects and adverse effects on the offspring were detected.

Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Subcutaneous  
 Developmental Toxicity: LOAEL: 0.2 mg/kg body weight  
 Symptoms: Early Resorptions / resorption rate., Reduced number of viable fetuses., Reduced body weight  
 Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

Reproductive toxicity - Assessment : May damage fertility. May damage the unborn child.

**Magnesium stearate:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 422  
 Result: negative  
 Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on data from similar materials

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Causes damage to organs (Liver, Bone, Blood, Endocrine system) through prolonged or repeated exposure.

Causes damage to organs (Endocrine system, Blood) through prolonged or repeated exposure if swallowed.

**Components:****17β-hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Routes of exposure : Ingestion  
 Target Organs : Endocrine system, Blood  
 Assessment : Causes damage to organs through prolonged or repeated exposure.

## Trenbolone / Estradiol LA Formulation

Version      Revision Date:      SDS Number:      Date of last issue: 05/06/2019  
 6.3            09/13/2019            26122-00014      Date of first issue: 10/28/2014

---

### Estradiol:

Target Organs                    : Liver, Bone, Blood, Endocrine system  
 Assessment                      : Causes damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

#### Components:

#### **17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Species                            : Pig  
 NOAEL                            : 0.004 mg/kg  
 LOAEL                            : 0.08 mg/kg  
 Exposure time                  : 14 Weeks  
 Target Organs                  : Testis, Ovary, Liver, Uterus (including cervix)

Species                            : Rat  
 NOAEL                            : 0.04 mg/kg  
 LOAEL                            : 3.6 mg/kg  
 Application Route              : Oral  
 Exposure time                  : 23 Weeks  
 Target Organs                  : Blood

Species                            : Monkey, female  
 NOAEL                            : 0.01 mg/kg  
 LOAEL                            : 0.04 mg/kg  
 Application Route              : Oral  
 Exposure time                  : 122 Days  
 Target Organs                  : female reproductive organs

Species                            : Monkey, male  
 NOAEL                            : 0.002 mg/kg  
 LOAEL                            : 0.04 mg/kg  
 Application Route              : Oral  
 Exposure time                  : 30 Days  
 Target Organs                  : male reproductive organs

Species                            : Rat  
 NOAEL                            : 0.05 mg/kg  
 LOAEL                            : 0.1 mg/kg  
 Application Route              : Oral  
 Exposure time                  : 3 Months  
 Target Organs                  : male reproductive organs, Ovary, Uterus (including cervix)

### Estradiol:

Species                            : Rat  
 LOAEL                            :  $\geq 0.17$  mg/kg  
 Application Route              : Ingestion  
 Exposure time                  : 90 d  
 Target Organs                  : Mammary gland, Ovary, Uterus (including cervix), Liver, Bone, Endocrine system, Blood, Testis

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

### Magnesium stearate:

Species	:	Rat
NOAEL	:	> 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Remarks	:	Based on data from similar materials

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Components:

#### **17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Ingestion	:	Symptoms: male reproductive effects, gynecomastia, changes in libido
-----------	---	--

#### **Estradiol:**

Inhalation	:	Symptoms: tingling, Nose bleeding
Skin contact	:	Symptoms: Skin irritation, Redness, pruritis
Ingestion	:	Symptoms: Headache, Gastrointestinal disturbance, Dizziness, Vomiting, Diarrhea, water retention, liver function change, changes in libido, breast tenderness, menstrual irregularities

---

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### **17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.000035 mg/l Exposure time: 21 d Method: OECD Test Guideline 229 Remarks: Based on data from similar materials
-------------------------------------	---	---

#### **Estradiol:**

Toxicity to fish	:	LC50 (Oryzias latipes (Japanese medaka)): 3.9 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.7 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 1.7 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.7 mg/l Exposure time: 72 h

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC (*Oryzias latipes* (Japanese medaka)): 0.000003 mg/l  
Exposure time: 160 d  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 0.2 mg/l  
Exposure time: 21 d

Toxicity to microorganisms : EC50: > 100 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

NOEC: 100 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

**Magnesium stearate:**

Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): > 100 mg/l  
Exposure time: 48 h  
Method: DIN 38412  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (*Daphnia magna* (Water flea)): > 1 mg/l  
Exposure time: 47 h  
Test substance: Water Accommodated Fraction  
Method: Directive 67/548/EEC, Annex V, C.2.  
Remarks: Based on data from similar materials  
No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : EL50 (*Pseudokirchneriella subcapitata* (green algae)): > 1 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials  
No toxicity at the limit of solubility.

NOELR (*Pseudokirchneriella subcapitata* (green algae)): > 1 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC10 (*Pseudomonas putida*): > 100 mg/l  
Exposure time: 16 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials



## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
Date of first issue: 10/28/2014

---

**Persistence and degradability****Components:****Estradiol:**

Biodegradability : Result: rapidly degradable  
Biodegradation: 84 %  
Exposure time: 24 hrs

**Magnesium stearate:**

Biodegradability : Result: Not biodegradable.  
Remarks: Based on data from similar materials

**Bioaccumulative potential****Components:****17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate:**

Partition coefficient: n-octanol/water : log Pow: 3.77

**Estradiol:**

Partition coefficient: n-octanol/water : log Pow: 4.01

**Magnesium stearate:**

Partition coefficient: n-octanol/water : log Pow: > 4

**Mobility in soil****Components:****Estradiol:**

Distribution among environmental compartments : log Koc: 3.81

**Other adverse effects**

No data available

---

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

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

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

---

## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

Class : N.O.S.  
 (Estradiol, 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate)  
 : 9  
 Packing group : III  
 Labels : 9

**IATA-DGR**

UN/ID No. : UN 3077  
 Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
 (Estradiol, 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate)  
 Class : 9  
 Packing group : III  
 Labels : Miscellaneous  
 Packing instruction (cargo aircraft) : 956  
 Packing instruction (passenger aircraft) : 956  
 Environmentally hazardous : yes

**IMDG-Code**

UN number : UN 3077  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
 N.O.S.  
 (Estradiol, 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 EmS Code : F-A, S-F  
 Marine pollutant : yes

**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**

UN/ID/NA number : UN 3077  
 Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
 (Estradiol, 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate)  
 Class : 9  
 Packing group : III  
 Labels : CLASS 9  
 ERG Code : 171  
 Marine pollutant : yes(Estradiol, 17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate)  
 Remarks : Above applies only to containers over 119 gallons or 450 liters., Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

### SECTION 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know

##### 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** : Combustible dust  
 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

17 $\beta$ -hydroxyestra-4,9,11-trien-3-one 17-acetate	10161-34-9
D-Glucose, 4-O-.beta.-D-galactopyranosyl-, monohydrate	64044-51-5
Estradiol	50-28-2

##### California Prop. 65

WARNING: This product can expose you to chemicals including Estradiol, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

##### California List of Hazardous Substances

Estradiol	50-28-2
-----------	---------

##### California Permissible Exposure Limits for Chemical Contaminants

Magnesium stearate	557-04-0
--------------------	----------

#### The ingredients of this product are reported in the following inventories:

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

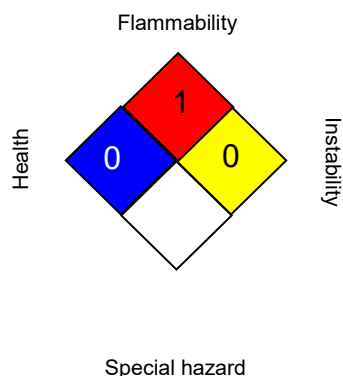
## Trenbolone / Estradiol LA Formulation

Version 6.3      Revision Date: 09/13/2019      SDS Number: 26122-00014      Date of last issue: 05/06/2019  
 Date of first issue: 10/28/2014

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

<b>HEALTH</b>	*	<b>3</b>
<b>FLAMMABILITY</b>	<b>3</b>	
<b>PHYSICAL HAZARD</b>	<b>0</b>	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
 ACGIH / TWA : 8-hour, time-weighted average

AICS - Australian Inventory of Chemical Substances; 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

## Trenbolone / Estradiol LA Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 05/06/2019
6.3	09/13/2019	26122-00014	Date of first issue: 10/28/2014

---

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 : 09/13/2019

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