

# 6,15-diketo-13,14-dihydro Prostaglandin F1 $\alpha$

sc-205160

Material Safety Data Sheet



The Power to Question

Hazard Alert Code Key: **EXTREME** **HIGH** **MODERATE** **LOW**

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

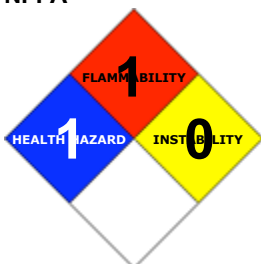
### PRODUCT NAME

6,15-diketo-13,14-dihydro Prostaglandin F1 $\alpha$

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Company: Santa Cruz Biotechnology, Inc. Company: Santa Cruz Biotechnology, Inc. Address: Address: 2145 Delaware Ave 2145 Delaware Ave Santa Cruz, CA 95060 Santa Cruz, CA 95060 United States of America Telephone: 800.457.3801 or 831.457.3800 Telephone: 800.457.3801 or 831.457.3800 Emergency Tel: **CHEMWATCH: From within the US and Emergency Tel: ChemWatch Canada: 877- 715- 9305 Emergency Tel: From within the US and Canada: 877- Emergency Tel: From outside the US and Canada: 715- 9305 From outside the US and Canada: 800- +800 2436 2255 (1- 800- CHEMCALL) or call +613 2436- 2255 (1- 800- CHEMCALL) Or call 613- 9573- 9573 3112 3112**

### PRODUCT USE

■ Intermediate.

### SYNONYMS

C20-H34-O6, "prostaglandin derivative", "autocoid/ eicosanoid/ prostanoic acid derivative"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

|               |   | Min | Max                                                     |  |
|---------------|---|-----|---------------------------------------------------------|--|
| Flammability: | 1 |     |                                                         |  |
| Toxicity:     | 2 |     |                                                         |  |
| Body Contact: | 2 |     |                                                         |  |
| Reactivity:   | 1 |     |                                                         |  |
| Chronic:      | 3 |     |                                                         |  |
|               |   |     | Min/Nil=0<br>Low=1<br>Moderate=2<br>High=3<br>Extreme=4 |  |

### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Harmful by inhalation, in contact with skin and if swallowed.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

##### EYE

■ Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn).

Slight abrasive damage may also result.

##### SKIN

■ Skin contact with the material may be harmful; systemic effects may result following absorption.

■ The material is not thought to be a skin irritant (as classified using animal models).

Abrasive damage however, may result from prolonged exposures.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.

Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

■ Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful.

■ The material is not thought to produce respiratory irritation (as classified using animal models).

Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

■ Prostaglandins are released by a wide range of stimuli and is related to a number of biological functions.

They are implicated in inflammation and period pain.

#### CHRONIC HEALTH EFFECTS

■ Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified using animal models); nevertheless exposure by all routes should be minimized as a matter of course.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME                                       | CAS RN     | %   |
|--------------------------------------------|------------|-----|
| 6,15-diketo-13,14-dihydroprostaglandin F1A | 63983-53-9 | >98 |

## Section 4 - FIRST AID MEASURES

##### SWALLOWED

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

##### EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

##### SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

##### INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

#### NOTES TO PHYSICIAN

- for poisons (where specific treatment regime is absent):

#### BASIC TREATMENT

- Establish a patent airway with suction where necessary.
  - Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

|                             |                |
|-----------------------------|----------------|
| Vapour Pressure (mmHG):     | Negligible     |
| Upper Explosive Limit (%):  | Not available. |
| Specific Gravity (water=1): | Not available  |
| Lower Explosive Limit (%):  | Not available  |

### EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.

### FIRE FIGHTING

- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.

### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible solid which burns but propagates flame with difficulty.
  - Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material. May emit poisonous fumes.

### FIRE INCOMPATIBILITY

- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

### PERSONAL PROTECTION

Glasses:  
Chemical goggles.  
Gloves:  
Respirator:  
Particulate

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

### MAJOR SPILLS

- Moderate hazard.
- CAUTION: Advise personnel in area.
- Alert Emergency Responders and tell them location and nature of hazard.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

### RECOMMENDED STORAGE METHODS

- Polyethylene or polypropylene container.

· Check all containers are clearly labelled and free from leaks.

## STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

| Source                                                                    | Material                                                                                                                           | TWA ppm | TWA mg/m³ | STEL ppm | STEL mg/m³ | Peak ppm | Peak mg/m³ | TWA F/CC | Notes                                                                                                                                                                           |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|----------|------------|----------|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Canada - Ontario Occupational Exposure Limits                             | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particles (Insoluble or Poorly Soluble) Not Otherwise)                                 |         | 10 (I)    |          |            |          |            |          |                                                                                                                                                                                 |
| Canada - British Columbia Occupational Exposure Limits                    | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))               |         | 10 (N)    |          |            |          |            |          |                                                                                                                                                                                 |
| Canada - Ontario Occupational Exposure Limits                             | 6,15-diketo-13,14-dihydroprostaglandin F1A (Specified (PNOS) / Particules (insolubles ou peu solubles) non précisées par ailleurs) |         | 3 (R)     |          |            |          |            |          |                                                                                                                                                                                 |
| US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated Respirable fraction)                              |         | 5         |          |            |          |            |          |                                                                                                                                                                                 |
| US - California Permissible Exposure Limits for Chemical Contaminants     | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated Respirable fraction)                              |         | 5         |          |            |          |            |          | (n)                                                                                                                                                                             |
| US - Oregon Permissible Exposure Limits (Z-1)                             | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated (PNOR) (f) Total Dust)                            | -       | 10        |          |            |          |            |          | Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not otherwise regulated." |
| US - Michigan Exposure Limits for Air Contaminants                        | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated,                                                  |         | 5         |          |            |          |            |          |                                                                                                                                                                                 |

| Respirable dust)                                                                 |                                                                                                                  |   |    |  | Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not otherwise regulated." |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---|----|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| US - Oregon Permissible Exposure Limits (Z-1)                                    | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction) | - | 5  |  |                                                                                                                                                                                 |
| US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction) |   | 5  |  |                                                                                                                                                                                 |
| Canada - Prince Edward Island Occupational Exposure Limits                       | 6,15-diketo-13,14-dihydroprostaglandin F1A (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)   |   | 10 |  | See Appendix B current TLV/BEI Book                                                                                                                                             |
| ENDOELTABLE                                                                      |                                                                                                                  |   |    |  |                                                                                                                                                                                 |

## PERSONAL PROTECTION



### RESPIRATOR

- particulate.

### EYE

- Safety glasses with side shields
- Chemical goggles.

### HANDS/FEET

■ Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocautchouc

- polyvinyl chloride
- Gloves should be examined for wear and/ or degradation constantly.

#### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

#### ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Solid.

Mixes with water.

|                           |                |                                |                |
|---------------------------|----------------|--------------------------------|----------------|
| State                     | Divided solid  | Molecular Weight               | 370.50         |
| Melting Range (°F)        | Not available  | Viscosity                      | Not Applicable |
| Boiling Range (°F)        | Not available  | Solubility in water (g/L)      | Miscible       |
| Flash Point (°F)          | Not available  | pH (1% solution)               | Not available  |
| Decomposition Temp (°F)   | Not available. | pH (as supplied)               | Not applicable |
| Autoignition Temp (°F)    | Not available  | Vapour Pressure (mmHG)         | Negligible     |
| Upper Explosive Limit (%) | Not available. | Specific Gravity (water=1)     | Not available  |
| Lower Explosive Limit (%) | Not available  | Relative Vapor Density (air=1) | >1             |
| Volatile Component (%vol) | Negligible     | Evaporation Rate               | Not applicable |

### APPEARANCE

■ Prostaglandins are a family of biologically potent lipid derived from membrane phospholipids. They consist of a C20-unsaturated fatty acid containing a cyclopentane ring and are divided into types E, F, A, B, C based on functions on the cyclopentane ring. Numerical subscripts refer to the number of unsaturations in the side chains whilst alpha- and beta- subscripts describe the configuration of ring substituents. It is thought that E1, E2, E3, F2alpha, and F3 alpha are primary structures as no one is derived from another in the living organism. The A and B group is derived from the E group structures whilst the D group is derived from F structures. Powder; mixes with water. Soluble in acetone.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

6,15-diketo-13,14-dihydroprostaglandin F1A

### TOXICITY AND IRRITATION

#### 6,15-DIKETO-13,14-DIHYDROPROSTAGLANDIN F1A:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.
  - No significant acute toxicological data identified in literature search.
- Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

## Section 12 - ECOLOGICAL INFORMATION

No data

### Ecotoxicity

| Ingredient                                 | Persistence:<br>Water/Soil | Persistence: Air     | Bioaccumulation | Mobility |
|--------------------------------------------|----------------------------|----------------------|-----------------|----------|
| 6,15-diketo-13,14-dihydroprostaglandin F1A | LOW                        | No Data<br>Available | LOW             | HIGH     |

### GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / EHS TRN A1a A1b A1 A2 B1 B2 C1 C2 C3 D1 D2 D3 E1 E2 E3 Cas No / RTECS No \_\_\_\_\_  
\_\_\_\_\_ Fatty 226 278 5 0 (R) 0 NI (0) (0) (1) (1) (1) NI 2 acids, 1 0 linear C12+ saturated with C12+  
unsaturat ed / CAS:63983 - 53- 9 /

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships)  
NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation,  
B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg),  
C2=Acute mammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation &  
corrosion, D2=Eye irritation & corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats,  
E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3:  
C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lung injury,  
N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater,  
F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard.  
(GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

! Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

## Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

**6,15-diketo-13,14-dihydroprostaglandin F1A (CAS: 63983-53-9) is found on the following regulatory lists;**  
"IMO IBC Code Chapter 17: Summary of minimum requirements"

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

- May be harmful to the foetus/ embryo\*.

\* (limited evidence).

*Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes*

*no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.*

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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