

MATERIAL SAFETY DATA SHEET

Prostaglandin E1

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Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 02/06/2007
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Date Created: 06/27/1996

1. Product and Company Identification

Product Code: 13010
Product Name: Prostaglandin E1
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Chemical Family: Prostaglandins & Thromboxanes
CAS Number: 745-65-3
RTECS #: GY4569800
Synonyms: 9-oxo-11.alpha.,15S-dihydroxy-prost-13E-en-1-oic acid; Alprostadil; PGE1;

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TLV	Other Limits
1. Prostaglandin E1	745-65-3	100.0 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Prostaglandin E1	GY4569800	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? No Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): Females of childbearing potential should avoid this chemical; contact may induce uterine contractions.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause adverse reproductive effects in males and/or females.
May cause eye, skin, or respiratory system irritation.
Stimulates contraction of intestinal and reproductive smooth muscle.
The toxicological properties of this compound have not been fully evaluated.
This chemical has the potential to induce premature labor or abortion.
Toxic.
LD 50/LC 50: Please refer to Section 11.
Signs and Symptoms Of Exposure: Exposure can cause: Nausea, diarrhea, headache, vomiting, flushing, shivering, hypotension, and dizziness.
May cause skin to flush in affected areas.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

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5. Fire Fighting Measures

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Flammable Properties and Hazards: Emits toxic fumes under fire conditions.
May form explosive mixtures with air.

Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.

Unsuitable Extinguishing Media: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Vacuum or sweep up material and place in disposal container.
Avoid raising dust.
After removal, ventilate contaminated area and flush thoroughly with water.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling.

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
Avoid contact with eyes, skin, and clothing.
Avoid prolonged or repeated exposure.
Do not reuse this container.
Pregnant females should avoid exposure to this compound.
Use with adequate ventilation.
Wash thoroughly after handling.

Precautions To Be Taken in Storing: Do not store in direct sunlight.
Keep tightly closed.
Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information: Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): Government approved respirator as conditions warrant.

Eye Protection: Safety glasses

Protective Gloves: Latex disposable gloves

Other Protective Clothing: Lab coat

Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices: Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [] Liquid [X] Solid

Melting Point: 119.00 C - 120.00 C

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data. Method:

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Explosive Limits:	LEL: No data.	UEL: No data.
Specific Gravity (Water = 1):	No data.	
Vapor Pressure (vs. Air or mm Hg):	No data.	
Vapor Density (vs. Air = 1):	No data.	
Evaporation Rate (vs Butyl Acetate=1):	No data.	
Solubility in Water:	1.67 mg/ml* at 25.0 C	
Other Solubility Notes:	*PBS pH 7.2, sol. in EtOH, DMSO, & DMF, see product insert.	
Percent Volatile:	No data.	
Corrosion Rate:	No data.	
Formula:	C20H34O5	
Molecular Weight:	354.50	
pH:	No data.	
Appearance and Odor:	Light yellow to white needles	

10. Stability and Reactivity

Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	protect from heat protect from light protect from moisture
Incompatibility - Materials To Avoid:	strong oxidizing agents
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide
Hazardous Polymerization:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Polymerization:	No data available.

11. Toxicological Information

Toxicological Information: The toxicological effects of this compound have not been thoroughly studied.

Toxicity Data:

Oral LD50 (rat):228 mg/kg

Intraperitoneal LD50 (rat):24900 ug/kg

Subcutaneous LD50 (rat):18600 ug/kg

Intravenous LD50 (rat):19200 ug/kg

Intraarterial LD50 (rat):21 mg/kg

Oral LD50 (mouse):186 mg/kg

Intraperitoneal LD50 (mouse):19800 ug/kg

Subcutaneous LD50 (mouse):26400 ug/kg

Intravenous LD50 (mouse):21 mg/kg

Chronic Toxicological Effects: Investigated as a mutagen and teratogen.
May cause reproductive disorders.

Target organ data:

Effects on embryo or fetus (fetal death)

Effects on embryo or fetus (fetotoxicity)

Effects on fertility (abortion)

Effects on fertility (litter size)

Effects on fertility (other measures of fertility)

Effects on fertility (pre-implantation mortality)

Effects on fertility (post-implantation mortality)

Effects on newborn (biochemical and metabolic)

Maternal effects (ovaries, fallopian tubes)

Maternal effects (parturition)

Maternal effects (postpartum)

Maternal effects (uterus, cervix, vagina)

Paternal effects (prostate, seminal vesicle, Cowper's, accessory glands)

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Paternal effects (spermatogenesis)
Paternal effects (testes, epidymis, sperm duct)
Specific developmental abnormalities (central nervous system)
Specific developmental abnormalities (eye, ear)
Specific developmental abnormalities (homeostasis)
Specific developmental abnormalities (musculoskeletal system)

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
See actual entry in RTECS for complete information.
Prostaglandin E1 RTECS Number: GY4569800

Carcinogenicity/Other Information:

No data available.

Carcinogenicity:

NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information:

Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method:

Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)**DOT Proper Shipping Name:**

No data available.

Additional Transport Information:

Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Prostaglandin E1	745-65-3	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Prostaglandin E1	745-65-3	No	No	No	No

16. Other Information

Company Policy or Disclaimer

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