

Prostaglandin Metabolite HPLC Mixture

Revision: 01/24/2013

Supercedes Revision: 03/06/2003

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



1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 10005

Product Name: Prostaglandin Metabolite HPLC Mixture

Intended Use: For research use only, not for human or veterinary use.

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed
Toxic To Reproduction, Category 1B	Health hazard	Danger	May damage fertility or the unborn child
Flammable Liquids, Category 2	Flame	Danger	Highly flammable liquid and vapor
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Target Organ Systemic Toxicity (single exposure), Category 3	Exclamation point	Warning	May cause respiratory irritation, or may cause drowsiness and dizziness

GHS Hazard Phrases:

H302: Harmful if swallowed.

H360: May damage fertility or the unborn child.

H225: Highly flammable liquid and vapor

H316: Causes mild skin irritation.

H319: Causes serious eye irritation

H336: May cause drowsiness or dizziness.

EUH066: Repeated exposure may cause skin dryness or cracking.

GHS Precaution Phrases:

P264: Wash hands thoroughly after handling.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P281: Use personal protective equipment as required.

P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

GHS Response Phrases:

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330: Rinse mouth.

P308+313: IF exposed or concerned: Get medical attention/advice.

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+313: If eye irritation persists, get medical advice/attention.

P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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GHS Storage and Disposal Phrases:	Please refer to Section 7 for Storage and Section 13 for Disposal information.
Route(s) of Entry:	Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic):	<p>Causes serious eye irritation.</p> <p>Causes mild skin irritation.</p> <p>Exposure may cause vasodilation and an inhibition of platelet aggregation.</p> <p>Harmful if swallowed.</p> <p>Material may be irritating to the mucous membranes and upper respiratory tract.</p> <p>May be harmful by inhalation or skin absorption.</p> <p>May cause adverse reproductive effects in males and/or females.</p> <p>May cause gastrointestinal disturbances.</p> <p>May cause harm to the unborn child.</p> <p>May cause respiratory system irritation.</p> <p>May impair fertility.</p> <p>May stimulate contraction of intestinal and reproductive smooth muscle.</p> <p>Repeated exposure may cause skin dryness or cracking.</p> <p>Vapors may cause drowsiness and dizziness.</p> <p>This chemical has the potential to induce premature labor or abortion.</p>
Target Organs:	Central nervous system, Eyes, Reproductive system, Gastrointestinal System, Kidneys, Smooth muscles, Respiratory system, Endocrine system, Skin.
LD 50 / LC 50:	Please refer to Section 11.
Signs and Symptoms Of Exposure:	<p>Exposure can cause: diarrhea, dizziness, fever, flushing, headache, hypotension, nausea, shivering, vomiting.</p> <p>Exposure may cause: coughing, drowsiness, narcosis, optic nerve atrophy, chest tightness.</p> <p>Exposure may cause sensitization.</p> <p>To the best of our knowledge, the toxicological properties have not been thoroughly investigated.</p>
Medical Conditions Generally Aggravated By Exposure:	No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	0.02 %	NA	R22-60-61	NA
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	0.02 %	NA	R22-60-61	NA
3. Prostaglandin F2.beta.	4510-16-1	0.02 %	NA	R22-60-61	MJ9658000
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	0.02 %	NA	R22-60-61	NA
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	0.02 %	NA	R22-60-61	UK8420800
6. Methyl acetate	79-20-9	99.9 %	201-185-2	R11-36-66-67	AI9100000

4. First Aid Measures

Emergency and First Aid Procedures:	
In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In Case of Ingestion:	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.
Indication of any immediate medical attention and special treatment needed:	No data available.

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5. Fire Fighting Measures

Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.
Flammable Properties and Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flash point. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.
Flash Pt:	-10.00 C Method Used: Closed Cup
Autoignition Pt:	455.00 C
Explosive Limits:	LEL: 3.1% at 25.0 C UEL: 16.0% at 25.0 C
Hazardous Combustion Products:	No data available.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes. Note: Flammable as diluted in methyl acetate.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.
Steps To Be Taken In Case Material Is Released Or Spilled:	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.
Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep container tightly closed. Store in accordance with information listed on the product insert.
Other Precautions:	Protect from moisture.
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	No data.	No data.	No data.
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	No data.	No data.	No data.
3. Prostaglandin F2.beta.	4510-16-1	No data.	No data.	No data.
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	No data.	No data.	No data.
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	No data.	No data.	No data.
6. Methyl acetate	79-20-9	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	No data.	No data.	No data.

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Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	No data.	No data.	No data.
3. Prostaglandin F2.beta.	4510-16-1	No data.	No data.	No data.
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	No data.	No data.	No data.
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	No data.	No data.	No data.
6. Methyl acetate	79-20-9	TWA: 616 mg/m3 (200 ppm) STEL: 770 mg/m3 (250 ppm)	TWA: 610 mg/m3 (200 ppm) STEL: 760 mg/m3 (250 ppm)	No data.

Protective Equipment Summary - Hazard Label Information:

Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

Engineering Controls (Ventilation etc.):

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Eye Protection:

Safety glasses

Protective Gloves:

Compatible chemical-resistant gloves

Other Protective Clothing:

Lab coat

Respiratory Equipment (Specify Type):

NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices:

Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
Wash thoroughly after handling.

Environmental Exposure Controls:

No data available.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance and Odor:	Solution
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	-10.00 C Method Used: Closed Cup
Evaporation Rate:	No data.
Explosive Limits:	LEL: 3.1% at 25.0 C UEL: 16.0% at 25.0 C
Vapor Pressure (vs. Air or mm Hg):	173 MM_HG at 20.0 C
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	455.00 C
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.

10. Stability and Reactivity

Reactivity:	No data available.
Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	heat, flames and sparks

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Polymerization: Will occur [] Will not occur [X]

Incompatibility - Materials To Avoid: acids
bases
nitrates
strong oxidizing agents

Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide

11. Toxicological Information

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

Methyl Acetate - Toxicity Data: Oral LD50 (rat): >5,000 mg/kg; Oral LD50 (rabbit): 3,705 mg/kg; Skin LD50 (rabbit): >5,000 mg/kg; Inhalation TCLO (human): 15,000 mg/m³ mg/kg; Methyl Acetate - Irritation Data: Skin (rabbit): 500 mg (24h) mild; Eyes (rabbit): 100 mg (24h) moderate;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.
Methyl Acetate RTECS Number: AI9100000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	n.a.	n.a.	n.a.	n.a.
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	n.a.	n.a.	n.a.	n.a.
3. Prostaglandin F2.beta.	4510-16-1	n.a.	n.a.	n.a.	n.a.
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	n.a.	n.a.	n.a.	n.a.
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	n.a.	n.a.	n.a.	n.a.
6. Methyl acetate	79-20-9	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Avoid release into the environment.
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

Globally Harmonized System of Classification and Labelling

Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed
 Toxic To Reproduction, Category 1B - Danger! May damage fertility or the unborn child
 Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor
 Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation
 Target Organ Systemic Toxicity (single exposure), Category 3 - Warning! May cause respiratory irritation, or may cause drowsiness and dizziness

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Methyl Acetate Solution

DOT Hazard Class: 3

DOT Hazard Label: FLAMMABLE LIQUID

UN/NA Number: 1231

Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Methyl Acetate Solution



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UN Number: 1231
Hazard Class: 3 - FLAMMABLE LIQUID
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Methyl Acetate Solution
UN Number: 1231
Hazard Class: 3 - FLAMMABLE LIQUID
Packing Group: II
IATA Classification: 3

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes F: Highly Flammable; Xn: Harmful

European Community Risk and Safety Phrases

- R11 - Highly flammable.
- R22 - Harmful if swallowed.
- R36 - Irritating to eyes.
- R60 - May impair fertility.
- R61 - May cause harm to the unborn child.
- R66 - Repeated exposure may cause skin dryness or cracking
- R67 - Vapours may cause drowsiness and dizziness
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S29 - Do not empty into drains.
- S33 - Take precautionary measures against static discharges.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)
- S53 - Avoid exposure - obtain special instructions before use.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	No	No	No	No
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	No	No	No	No
3. Prostaglandin F2.beta.	4510-16-1	No	No	No	No
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	No	No	No	No
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	No	No	No	No
6. Methyl acetate	79-20-9	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. 13,14-dihydro-15-keto Prostaglandin F2.alpha.	27376-76-7	No	No	No	No
2. 11.beta.-Prostaglandin F2.alpha.	38432-87-0	No	No	No	No
3. Prostaglandin F2.beta.	4510-16-1	No	No	No	No
4. 13,14-dihydro-15-keto Prostaglandin E2	363-23-5	No	No	No	No
5. 13,14-dihydro-15-keto Prostaglandin D2	59894-07-4	No	No	No	No
6. Methyl acetate	79-20-9	No	No	Inventory, 4 Test, 8A PAIR	No

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

16. Other Information**Revision Date:** 01/24/2013**Company Policy or Disclaimer**

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required