



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

72372 - 16,16-Dimethyl Prostaglandin E2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product identifier

**Product Name** 16,16-Dimethyl Prostaglandin E2

### Other means of identification

**Catalog Number** 72372

**UN/ID no.** 1231

**Document Number** DX21109

**Synonyms** 9-oxo-11 $\alpha$ ,15R-dihydroxy-16,16-dimethyl-prosta-5Z,13E-dien-1-oic acid; 16,16-dimethyl PGE2;

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

**Recommended Use** Laboratory chemicals

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier

STEMCELL Technologies Canada Inc.  
Suite 500 - 1618 Station Street  
Vancouver, British Columbia V6A 1B6 Canada

#### Emergency telephone number

**Emergency Telephone** 1-800-667-0322

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 1B



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

**72372 - 16,16-Dimethyl Prostaglandin E2**

Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**

**Danger**

**Hazard statements**

- Harmful if swallowed
- Harmful in contact with skin
- Harmful if inhaled
- Causes serious eye irritation
- May damage fertility or the unborn child
- May cause respiratory irritation
- Highly flammable liquid and vapor



**Appearance** A solution in methyl acetate

**Physical state** Liquid

**Odor** No information available

**Precautionary Statements - Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Wear protective gloves/protective clothing/eye protection/face protection
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ ventilating / lighting/ .? / equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

**Precautionary statements - Response**

- IF exposed or concerned: Get medical advice/attention
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

## 72372 - 16,16-Dimethyl Prostaglandin E2

If eye irritation persists: Get medical advice/attention  
Call a POISON CENTER or doctor if you feel unwell  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

### Precautionary Statements - Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

### Other Information

Not applicable

**Unknown acute toxicity** 100 % of the mixture consists of ingredient(s) of unknown toxicity

- 99 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 99 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 99 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substance

Not applicable.

### Mixture

**Synonyms** 9-oxo-11 $\alpha$ ,15R-dihydroxy-16,16-dimethyl-prosta-5Z,13E-dien-1-oic acid;. 16,16-dimethyl PGE<sub>2</sub>;

Chemical name	CAS No.	Weight-%
Methyl acetate	79-20-9	99
16,16-Dimethyl Prostaglandin E2	39746-25-3	1

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

**72372 - 16,16-Dimethyl Prostaglandin E2**

## Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

## Most important symptoms and effects, both acute and delayed

**Symptoms** Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

## Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Specific hazards arising from the chemical</b>	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	Yes.
<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.



# SAFETY DATA SHEET

72372 - 16,16-Dimethyl Prostaglandin E2

Revision Date 24-Oct-2018

Revision Number 2

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### Personal precautions

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid breathing vapors or mists.

#### Other Information

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

#### Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

### Methods and material for containment and cleaning up

#### Methods for containment

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

#### Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

#### Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Advice on safe handling

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. In case of insufficient ventilation, wear suitable respiratory equipment.



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

**72372 - 16,16-Dimethyl Prostaglandin E2**

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl acetate 79-20-9	TLV: 200 ppm STEL: 250 ppm	PEL: 200 ppm	-

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

72372 - 16,16-Dimethyl Prostaglandin E2

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Liquid
Appearance	A solution in methyl acetate
Color	No information available
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	57 °C / 134 °F	
Flash point	-10 °C / 14 °F	Closed Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	16% at 25.0°C	
Lower flammability limit:	3.1% at 25.0°C	
Vapor pressure	173 mm_Hg at 20.0°C	
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	455 °C / 851 °F	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

### Other Information

Softening point	No information available
Molecular weight	380.5
Molecular formula	C22H36O5
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

**72372 - 16,16-Dimethyl Prostaglandin E2**

<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks. Excessive heat.
<b>Incompatible materials</b>	Acids.
<b>Hazardous decomposition products</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide. Nitrogen oxides (NO <sub>x</sub> ).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be harmful if absorbed through the skin. Harmful in contact with skin. (based on components).
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	May cause redness and tearing of the eyes. Coughing and/ or wheezing.
-----------------	---

### Numerical measures of toxicity

#### Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

<b>ATEmix (oral)</b>	500.00 mg/kg
<b>ATEmix (dermal)</b>	1,100.00 mg/kg
<b>ATEmix (inhalation-gas)</b>	4,500.00 ppm

<b>Unknown acute toxicity</b>	100 % of the mixture consists of ingredient(s) of unknown toxicity
	99 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
	99 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity





# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

## 72372 - 16,16-Dimethyl Prostaglandin E2

99 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Oral LD50** >5,000 mg/kg (Rat); 3,705 mg/kg (Rabbit);

**Dermal LD50** >5,000 mg/kg (Rabbit)

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl acetate 79-20-9	>5,000 mg/kg (Rat) 3,705 mg/kg (Rabbit)	>5,000 mg/kg (Rabbit)	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** May cause skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Irritating to eyes.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** Classification based on data available for ingredients.

**STOT - single exposure** May cause respiratory irritation.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**RTECS #** 16,16-dimethyl Prostaglandin E2: UK7894000  
Methyl Acetate: AI9100000

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

72372 - 16,16-Dimethyl Prostaglandin E2

## Waste treatment methods

<b>Waste from residues/unused products</b>	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
<b>US EPA Waste Number</b>	D001.

## 14. TRANSPORT INFORMATION

**Note:** Transport in accordance with local, state, and federal regulations. When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

**DOT**  
**UN/ID no.** 1231  
**Proper shipping name** Methyl Acetate Solution  
**Hazard class** 3 - FLAMMABLE LIQUID  
**Packing Group** II

**TDG** Not regulated

**MEX** Not regulated

**ICAO (air)** Not regulated  
**UN/ID no.** 1231  
**Proper shipping name** Methyl Acetate Solution  
**Hazard class** 3 - FLAMMABLE LIQUID  
**Packing Group** II

**IATA** Not regulated  
**UN Number** 1231  
**UN proper shipping name** Methyl Acetate Solution  
**Transport hazard class(es)** 3 - FLAMMABLE LIQUID  
**Packing Group** II

**IMDG** Not regulated

**RID** Not regulated  
**UN Number** 1231  
**UN proper shipping name** Methyl Acetate Solution



# SAFETY DATA SHEET

Revision Date 24-Oct-2018

Revision Number 2

**72372 - 16,16-Dimethyl Prostaglandin E2**

**Transport hazard class(es)** 3 - FLAMMABLE LIQUID  
**Packing Group** II

**ADR** Not regulated  
**UN Number** 1231  
**UN proper shipping name** Methyl Acetate Solution  
**Transport hazard class(es)** 3 - FLAMMABLE LIQUID  
**Packing Group** II

**ADN** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Does not comply
<b>DSL/NDSL</b>	Does not comply
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AICS</b>	Does not comply

### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

<b>Acute health hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).



# SAFETY DATA SHEET

72372 - 16,16-Dimethyl Prostaglandin E2

Revision Date 24-Oct-2018

Revision Number 2

## CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

## U.S. State Right-to-Know Regulations

### US State Regulations

This product does not contain any substances regulated by state right-to-know regulations

## U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

**Prepared By,** Quality Control. STEMCELL Technologies Canada Inc.

**Revision Date** 24-Oct-2018

**Revision Note** No information available.

### Disclaimer

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

**End of Safety Data Sheet**