

**Safety Data Sheet (SDS)** According to the REACH Regulation (EC) No. 1907/2006

**Issuing Date:** 2015-01-23

**Revision Date:** 2022-11-21

**Version:** 4

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product No** 4174  
**Product name** TPA (12-O-Tetradecanoylphorbol-13-Acetate)

### Contains

<b>Chemical name</b>	<b>Index No.</b>	<b>CAS No</b>
Myristic acid, 9-ester with 1,1a-alpha,1b-beta,4,4a,7a-alpha,7b,8,9,9a-deca hydro-4a-beta,7b-alpha,9-beta,9a-alpha-tetrahydr oxy-3-(hydroxymethyl)-1,1,6,8-alpha-tetramethyl- 5H-cyclopropa(3,4)benz(1,2-e)azulen-5-one, 9a-acetate (90 - 100%)	Not Listed	16561-29-8

<b>Formula</b>	C <sub>36</sub> H <sub>56</sub> O <sub>8</sub>
<b>Molecular Weight</b>	616.83 g/mol

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** For research use only

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

<b>Importer</b>	<b>Manufacturer</b>
Cell Signaling Technology Europe B.V. Dellaertweg 9b 2316 WZ Leiden The Netherlands TEL: +31 (0)71 7200 200 FAX: +31 (0)71 891 0019	Cell Signaling Technology, Inc. 3 Trask Lane Danvers, MA 01923 United States TEL: +1 978 867 2300 FAX: +1 978 867 2400

<b>Website</b>	www.cellsignal.com
<b>E-mail Address</b>	info@cellsignal.eu

### 1.4. Emergency telephone number

**CHEMTREC** 24 hours a day, 7 days a week, 365 days a year  
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

**Europe** 112

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Regulation (EC) No. 1272/2008**

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
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## 4174 TPA (12-O-Tetradecanoylphorbol-13-Acetate)

Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity - single exposure (STOT SE)	Category 3 - (H335)

### 2.2. Label elements



#### Signal word

Warning.

#### Hazard statement(s)

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H351 - Suspected of causing cancer.

H335 - May cause respiratory irritation.

#### Precautionary statement(s)

P201 - Obtain special instructions before use.

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 - Call a POISON CENTER or doctor if you feel unwell.

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

P337 + P313 - If eye irritation persists: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

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

### 2.3. Other hazards

0% of the mixture consists of ingredient(s) of unknown acute toxicity.

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

## SECTION 3: Composition/information on ingredients

#### Synonyms

TPA;  
Tetradecanoylphorbol acetate;  
PMA;  
Phorbol-12-myristate 13-acetate;

#### Formula

C<sub>36</sub>H<sub>56</sub>O<sub>8</sub>

#### Chemical nature

Monoconstituent substance.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
Myristic acid, 9-ester with	16561-29-8	100	-	Carc. 2 (H351) Skin Irrit. 2 (H315)	no data available

## 4174 TPA (12-O-Tetradecanoylphorbol-13-Acetate)

1,1a-alpha,1b-beta,4,4a,7a-alpha,7b,8,9,9a-decahydro-4a-beta,7b-alpha,9-beta,9a-alpha-tetrahydroxy-3-(hydroxymethyl)-1,1,6,8-alpha-tetramethyl-5H-cyclopropa(3,4)benz(1,2-e)azulen-5-one, 9a-acetate				Eye Irrit 2 (H319) STOT SE 3 (H335)	
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For the full text of the R-phrases mentioned in this Section, see Section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Consult a physician.
<b>Protection of first-aiders</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

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

**Notes to physician** Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	No information available.

#### 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**6.3. Methods and material for containment and cleaning up**

**Methods for containment**  
**Methods for cleaning up**

Prevent further leakage or spillage if safe to do so.  
Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

**6.4. Reference to other sections**

See Sections 8 & 13 for additional information.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment.

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

Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**7.3. Specific end use(s)**

Use as a laboratory reagent.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

The product does not contain any hazardous materials with occupational exposure limits established.

**8.2. Exposure controls**

**Appropriate engineering controls**

Showers, eyewash stations, and ventilation systems.

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

<b>Eye/face protection</b>	Tightly fitting safety goggles
<b>Skin protection</b>	Wear protective gloves and protective clothing
<b>Hand protection</b>	Impervious gloves.
<b>Other</b>	Impervious gloves. Impervious clothing. Long sleeved clothing.
<b>Respiratory protection</b>	In case of inadequate ventilation wear respiratory protection.

**Environmental Exposure Controls**

No information available.

**SECTION 9: Physical and chemical properties**

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## 4174 TPA (12-O-Tetradecanoylphorbol-13-Acetate)

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### 9.1. Information on basic physical and chemical properties

Physical state	Solid
Color	Light yellow, Colorless
Odor	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		No information available
Melting point/freezing point	50-70 °C	
Boiling point or initial boiling point and boiling range		No information available
Flash point		No information available.
Evaporation rate		No information available
Flammability		No information available
Upper/lower flammability or explosive limits		No information available
Vapor pressure		No information available
Relative vapor density		No information available
Density and/or relative density		No information available
Solubility	Practically insoluble	No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available.
Viscosity		No information available
Explosive properties		No information available
Oxidizing properties		No information available

### 9.2. Other information

Softening point	No information available
Molecular Weight	616.83 g/mol
Solubility in other solvents	Ethanol, Dimethylsulfoxide
VOC content	No information available
Liquid Density	No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous reactions	None under normal processing.

### 10.4. Conditions to avoid

None known based on information supplied.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

None under normal use conditions.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

**Unknown Acute Toxicity** 0% of the mixture consists of ingredient(s) of unknown acute toxicity.

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Contact with eyes may cause irritation.
<b>Skin contact</b>	May cause irritation.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes.

<b>Symptoms</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	The weight of evidence demonstrates that this material is not genotoxic.
<b>Carcinogenic effects</b>	Tumorigenic - neoplastic tumors at site of application.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	Respiratory system.
<b>STOT - repeated exposure</b>	No information available.
<b>Target Organ Effects</b>	Skin, Eyes, Respiratory system, Gastrointestinal tract (GI).
<b>Aspiration Hazard</b>	No information available.

### 11.2. Information on other hazards

No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

No information available.

**Unknown Aquatic Toxicity** 0% of the mixture consists of components of unknown hazards to the aquatic environment.

### 12.2. Persistence and degradability

No information available

### 12.3. Bioaccumulative potential

**Bioaccumulation** No information available.

**Bioconcentration factor (BCF)** No information available.

### 12.4. Mobility in soil

No information available.

**12.5. Results of PBT and vPvB assessment**

No information available.

**12.6. Endocrine disrupting properties**

This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**

No information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Other information</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

**SECTION 14: Transport information**

**IMDG/IMO**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	Not regulated

**ADR/RID**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

**IATA**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Candidate List of Substances of Very High Concern for Authorization Information**

## 4174 TPA (12-O-Tetradecanoylphorbol-13-Acetate)

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This product does not contain Substances of Very High Concern (SVHC).

### SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

#### International inventories

<b>TSCA 8(b)</b>	TSCA 8(b)
<b>DSL/NDSL</b>	DSL/NDSL
<b>EINECS/ELINCS</b>	EINECS/ELINCS
<b>ENCS</b>	ENCS
<b>IECSC</b>	IECSC
<b>KECL</b>	KECL
<b>PICCS</b>	PICCS
<b>AICS</b>	AICS

#### International inventories 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 Commercial Chemical Substances/EU 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

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under Sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H351 - Suspected of causing cancer

**Classification procedure:** Expert judgment and weight of evidence determination.

**Issuing Date:** 2015-01-23

**Revision Date:** 2022-11-21

#### 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.