

Safety Data Sheet

ALL-TRANS RETINOIC ACID

EFFECTIVE DATE: 2014-08-20

1 Product and Company Identification

- 1.1 Product Name:** All-Trans Retinoic Acid
- 1.2 Product Identifier:** tretinoin
- 1.3 Catalog Number:** 72262, 72264
- 1.4 Synonyms:** ATRA; NSC 122578; Retinoic Acid; Trans Retinoic Acid; Tretinoin; Vitamin A Acid
- 1.5 Product Use:** Activates retinoic acid receptor
- 1.6 Manufacturer/Supplier:** STEMCELL Technologies SARL
40 rue des Berges, Miniparc Polytec, Bât. Sirocco,
38000 Grenoble, France
- 1.7 In Case of Emergency Call:** +33.(0).4.76.04.75.30

2 Hazards Identification

2.1 Classification of the substance or mixture

Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 2
Toxic To Reproduction, Category 1B
Aquatic Toxicity (Acute), Category 1
Aquatic Toxicity (Chronic), Category 1

2.2 Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H360 May damage fertility or the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264 Wash {hands} thoroughly after handling.
P280 Wear {protective gloves/protective clothing/eye protection/face protection}.

P362+364 Take off contaminated clothing and wash it before reuse.
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.
P273 Avoid release to the environment.

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P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P332+313 If skin irritation occurs, get medical advice/attention.
P308+313 IF exposed or concerned: Get medical attention/advice.
P391 Collect spillage.

2.3 Other hazards No data available

3 Composition / Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC #
All-Trans Retinoic Acid	302-79-4	100%	206-129-0

4 First Aid Measures

4.1 Description of first aid measures

4.1.1 If inhaled

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

4.1.2 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.

4.1.3 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.

4.1.4 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.

4.2 Most important symptoms and effects, both acute and delayed

The toxicological properties of this product have not been fully evaluated.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5 Fire Fighting Measures

5.1 Extinguishing Media

5.1.1 Suitable Extinguishing Media

Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

Use water spray to cool fire-exposed containers.

5.1.2 Unsuitable Extinguishing Media

A solid water stream may be inefficient.

5.2 Special hazards arising from the substance or mixture

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5.2.1 Flammable Properties and Hazards

No data available

5.2.2 Flash Pt

No data available

5.2.3 Autoignition Pt

No data available

5.2.4 Explosive Limits

LEL: No data available

UEL: No data available

5.2.5 Hazardous Combustion Products

No data available

5.3 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.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid raising and breathing dust, and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved (or equivalent) self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental precautions

Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and materials for containment and cleaning up

Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations.

7 Handling and Storage

7.1 Precautions for safe handling

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

Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage

Keep container tightly closed.

Store in accordance with information listed on the product insert.

8 Exposure Controls/Personal Protection

8.1 Exposure limits

Component	CAS #	Value	Control parameters
All-Trans Retinoic Acid	302-79-4	No data available	No data available

8.2 Engineering controls

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

8.3 Personal protective equipment

8.3.1 Eye/face protection

Safety glasses

8.3.2 Skin protection

Compatible chemical-resistant gloves

Lab coat

8.3.3 Respiratory protection

NIOSH (US) or CEN (EU) approved respirator, as conditions warrant.

8.3.4 General hygiene considerations

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.

8.3.5 Environmental exposure controls

No data available

9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	A crystalline solid
Odour	No data available
Odour threshold	No data available
Melting point/freezing point	No data available
Boiling point/boiling range	No data available
Decomposition temperature	No data available
Relative density	No data available
Solubility in water	No data available
Solubility in other liquids	~0.5 mg/mL in EtOH; ~20 mg/mL in DMF & DMSO
pH	No data available
Partition coefficient: n-octanol/water	No data available
Viscosity	No data available
Vapour pressure	No data available
Vapour density	No data available
Evaporation rate	No data available
Flash point	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Auto-ignition temperature	No data available

9.2 Other information

Molecular formula	C ₂₀ H ₂₈ O ₂
Molecular weight	300.40

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10 Stability and Reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	No data available
10.5 Incompatible materials	Oxidizing agents
10.6 Hazardous decomposition products	Carbon dioxide Carbon monoxide

11 Toxicological Information

- 11.1 Acute toxicity**
Toxicity Data: Oral LD50 (mouse): 1100 mg/kg; Oral LD50 (rat): 2000 mg/kg
- 11.2 Skin corrosion/irritation**
No data available
- 11.3 Serious eye damage/eye irritation**
No data available
- 11.4 Aspiration hazard**
No data available
- 11.5 Specific target organ toxicity - single exposure**
No data available
- 11.6 Specific target organ toxicity - repeated exposure**
No data available
- 11.7 Respiratory and/or skin sensitization**
No data available
- 11.8 Carcinogenicity**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- 11.9 Reproductive toxicity**
No data available
- 11.10 Germ cell mutagenicity**
No data available
- 11.11 Signs and symptoms of exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
- 11.12 RTECS #** VH6475000

12 Ecological Information

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12.1 Toxicity	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Other adverse effects	No data available

13 Disposal Considerations

13.1 Waste disposal method	Dispose in accordance with local, provincial/state, and federal regulations.
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14 Transport Information

14.1 UN number	No data available
14.2 UN proper shipping name	DOT Not dangerous goods ADR/RID Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods
14.3 Transport hazard class(es)	No data available
14.4 Packing group	No data available
14.5 Environmental hazards	No data available
14.6 Special precautions	No data available

15 Regulatory Information

15.1 US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
All-Trans Retinoic Acid	302-79-4	No	No	No	No

15.2 Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP, ODC	CWA NPDES	TSCA	CA PROP.65
All-Trans Retinoic Acid	302-79-4	No	No	Inventory	Yes

15.3 Regulatory information statement

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

16 Other Information

16.1 Prepared by:	Quality Control, STEMCELL Technologies Inc.
16.2 Revision:	N/A
16.3 Notice:	The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. STEMCELL Technologies Inc.

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shall not be held liable for any damage resulting from handling or from contact with the product. The information contained in this Safety Data Sheet (SDS) is current as of the Effective Date shown in this document and may be subject to amendment by STEMCELL Technologies Inc.

16.4 Disclaimer: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.