



# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

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

### Product identifier

**Product Name** All-Trans Retinoic Acid

### Other means of identification

**Catalog Number** 72262 72264

**UN/ID no.** 3077

**Document Number** DX21097

**Synonyms** ATRA; NSC 122758; Retinoic acid; Trans retinoic acid; Tretinoin; Vitamin A acid;

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

**Recommended Use** Laboratory chemicals

### 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)

Skin corrosion/irritation	Category 2
Reproductive toxicity	Category 1B

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements



# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

**Danger**

**Hazard statements**

Causes skin irritation  
May damage fertility or the unborn child



**Appearance** Crystalline

**Physical state** Solid

**Odor** No data 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

**Precautionary statements - Response**

IF exposed or concerned: Get medical advice/attention  
IF ON SKIN: Wash with plenty of water and soap  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Information**

Very toxic to aquatic life with long lasting effects  
Very toxic to aquatic life

**Unknown acute toxicity**

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

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 100 % 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



# SAFETY DATA SHEET

**72262 72264 - All-Trans Retinoic Acid**

Revision Date 09-May-2022

Revision Number 2.1

**Substance**

**Synonyms** ATRA; NSC 122758; Retinoic acid; Trans retinoic acid; Tretinoin; Vitamin A acid;

Chemical name	CAS No.	Weight-%
(2E,4E,6E,8E)-3,7-dimethyl-9-(2,6,6-trimethylcyclohexen-1-yl)nona-2,4,6,8-tetraenoic acid	302-79-4	100

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

## 4. FIRST AID MEASURES

**Description of first aid measures**

- General advice** Show this safety data sheet to the doctor in attendance.
- Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur.
- Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
- Skin contact** Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
- Ingestion** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
- Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

**Symptoms** No information available.

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

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.



# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

**Specific hazards arising from the chemical** No information available.

## Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

### Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** 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** 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. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store locked up. Store in accordance with information listed on the Product Information Sheet (PIS).



# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

## 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.

### Appropriate engineering controls

#### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

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

#### Eye/face protection

No special protective equipment required.

#### Hand protection

Wear suitable gloves. Impervious gloves.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

#### 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. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystalline
Color	No information available
Odor	No data available
Odor threshold	No data available



# SAFETY DATA SHEET

Revision Date 09-May-2022

Revision Number 2.1

## 72262 72264 - All-Trans Retinoic Acid

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	178 °C / (352.4 °F)	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	Product is not flammable.	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
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	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing properties	No information available	
<b>Other Information</b>		
Softening point	No information available	
Molecular weight	300.4	
Molecular formula	C <sub>20</sub> H <sub>28</sub> O <sub>2</sub>	
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 recommended transport or storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide.

### 11. TOXICOLOGICAL INFORMATION



# SAFETY DATA SHEET

**72262 72264 - All-Trans Retinoic Acid**

Revision Date 09-May-2022

Revision Number 2.1

**Information on likely routes of exposure**

**Product Information**

- Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
- Eye contact** Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components).
- Skin contact** Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
- Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

**Symptoms** Redness. May cause redness and tearing of the eyes.

**Numerical measures of toxicity**

**Acute toxicity**

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

- Unknown acute toxicity** 100 % of the mixture consists of ingredient(s) of unknown toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 100 % 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)

Product Information

**Oral LD50** 1100 mg/kg (mouse)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
(2E,4E,6E,8E)-3,7-dimethyl-9-(2,6,6-trimethylcyclohexen-1-yl)nona-2,4,6,8-tetraenoic acid 302-79-4	= 2 g/kg ( Rat )	-	-

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

**Skin corrosion/irritation** Classification based on data available for ingredients. Irritating to skin.

Product Information

**Serious eye damage/eye irritation** No information available.



# SAFETY DATA SHEET

Revision Date 09-May-2022

Revision Number 2.1

## 72262 72264 - All-Trans Retinoic Acid

### Product Information

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

### Product Information

**Germ cell mutagenicity** No information available.

### Product Information

**Carcinogenicity** No information available.

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

### Product Information

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

### Product Information

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

### Product Information

**Aspiration hazard** No information available.  
**RTECS #** VH6475000

## 12. ECOLOGICAL INFORMATION

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

### Product Information

**Persistence and degradability** No information available.

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

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.





# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

## 14. TRANSPORT INFORMATION

**Note:** 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.	3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (all-trans Retinoic Acid)
Hazard class	9
Packing Group	III

**TDG**

Not regulated

**MEX**

Not regulated

**ICAO (air)**

Not regulated

**IATA**

UN Number	3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (all-trans Retinoic Acid)
Transport hazard class(es)	9
Packing Group	III

**IMDG**

UN Number	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S. (all-trans Retinoic Acid)
Transport hazard class(es)	9
Packing Group	III

**RID**

Not regulated

**ADR**

Not regulated

**ADN**

Not regulated

## 15. REGULATORY INFORMATION

**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies



# SAFETY DATA SHEET

Revision Date 09-May-2022

Revision Number 2.1

## 72262 72264 - All-Trans Retinoic Acid

PICCS Complies  
AICS Complies

### 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

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	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).

#### 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 contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
(2E,4E,6E,8E)-3,7-dimethyl-9-(2,6,6-trimethylcyclohexen-1-yl)nona-2,4,6,8-tetraenoic acid - 302-79-4	Developmental



# SAFETY DATA SHEET

72262 72264 - All-Trans Retinoic Acid

Revision Date 09-May-2022

Revision Number 2.1

## 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** 09-May-2022

**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**