

Safety Data Sheet


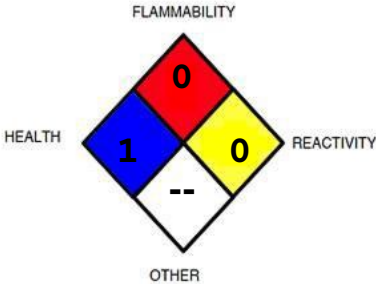
Section 1: Product & Company Identification

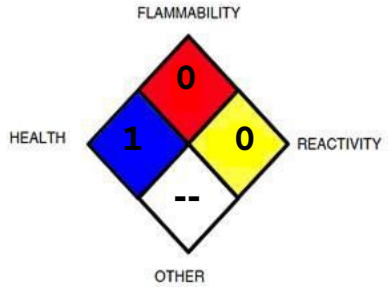
Product Name:	Retinoic Acid, <i>all-trans</i>
Product #:	R-2569
Synonyms:	atRA; NSC 122578; NSC 122758; RA; Vitamin A Acid
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Retinoic Acid, <i>all-trans</i>	302-79-4	206-129-0	

Section 3: Hazards Identification

Symbols	
HMIS Classification	<p>FLAMMABILITY</p>  <p>HEALTH REACTIVITY</p> <p>OTHER</p>

NFPA Classification	
----------------------------	---

Section 4: First Aid Measures

General Overview:	May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.
Inhalation:	In case of unconsciousness place patient stably in side position for transportation.
Skin:	Immediately wash with water and soap and rinse thoroughly.
Eyes:	Rinse opened eye for several minutes under running water.
Ingestion:	If symptoms persist consult doctor.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Product is not flammable.
Extinguishing Media:	Use firefighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	No data available
Flash Point:	No data available





Section 6: Accidental Release Measures

Personal Precautions:	See Section 7 for information on safe handling. See Section 8 for information on personal protective equipment.
Environmental Precautions:	Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
Methods for Clean-up:	See Section 13 for disposal information.

SECTION 7: Handling & Storage

Storage:	Keep container tightly closed. Recommended storage temperature: -20°C
Handling:	No special precautions are necessary if used correctly. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>Not required.</p>
Skin and Body:	  <p>Protective gloves and lab coat.</p>
Eyes:	 <p>Not required.</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Handle in accordance with good industrial hygiene and safety practice.
Other:	N/A

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Crystalline, characteristic odor
Formula	C ₂₀ H ₂₈ O ₂
Molecular Wt.	300.4
Melting Pt.	178°C
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	DMF, DMSO
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	Carbon oxides
Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	VH6475000
ACUTE Toxicity:	<p>Oral LD50 = 1,100 mg/kg (mouse) Oral LD50 = 2 g/kg (rat) Intraperitoneal LD50 = 208 mg/kg (mouse) Intraperitoneal LD50 = 96 mg/kg (rat) Subcutaneous LD50 = 253 mg/kg (mouse) Subcutaneous LD50 = 53 mg/kg (rat)</p> <p>Primary irritant effect on the skin: Irritant to skin and mucous membranes.</p>
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>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.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p>

	<p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>
--	--

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 2 (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms.
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	UN3077
ADR / RID (LAND):	N/A
DOT regulations:	<p>UN3077</p> <p>Environmentally hazardous substance, solid, n.o.s. (all-trans Retinoic Acid)</p> <p>Class 9 - Miscellaneous dangerous substances and articles</p> <p>Label 9</p> <p>Packing Group III</p> <p>Quantity limitations</p>

	<p>On passenger aircraft/rail: no limit On cargo aircraft only: no limit</p>
IMDG/IMO (SEA):	<p>UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (all-trans Retinoic Acid) Class 9 - Miscellaneous dangerous substances and articles Label 9 Packing Group III</p> <p>Limited Quantities (LQ): 5 kg Excepted Quantities (EQ): Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
IATA/DGR (AIR):	<p>UN3077 Environmentally hazardous substance, solid, n.o.s. (all-trans Retinoic Acid) Class 9 - Miscellaneous dangerous substances and articles Label 9 Packing Group III</p> <p>Remarks: 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.</p>
Special Provisions:	<p>Hazard identification number (Kemler code): 90 EMS Number: F-A,S-F Stowage Category: A Stowage Code: SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>

SECTION 15: Regulatory Information

Health Phrases:	<p>Danger! 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.</p>
Risk Phrases:	<p>Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.</p>
Safety Phrases:	<p>If on skin: Wash with plenty of water. IF exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.</p>

	<p>Collect spillage. Store locked up. Dispose of contents/container in accordance with local/regional/national /international regulations</p>
EU Regulations:	N/A
US Regulations:	<p>TSCA: Listed California Proposition 65: No products were found</p>
U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found. SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: Repr. (1B), Aquatic Acute (1), Aquatic Chronic (1), Skin Irrit. (2)</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*