

MATERIAL SAFETY DATA SHEET

2-Arachidonoyl Glycerol

Page: 1

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Printed: 07/24/2009
Revision: 07/21/2009
Supersedes Revision: 08/27/2005
Date Created: 10/27/1999

1. Product and Company Identification

Product Code: 62160
Product Name: 2-Arachidonoyl Glycerol
Manufacturer Information
Company Name: Cayman Chemical Company
Emergency Contact: Cayman Chemical Company (800)364-9897
Information: Cayman Chemical Company (734)971-3335
Chemical Family: Lipid Neurotransmitters
Synonyms: 5Z,8Z,11Z,14Z-eicosatetraenoic acid, 2-glyceryl ester; 2-AG;

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TLV	Other Limits
1. 2-Arachidonoyl glycerol	53847-30-6	1.0 %	No data.	No data.	No data.
2. Acetonitrile	75-05-8	99.0 %	8H TWA:40ppm (70 mg/m3)	TWA: 20 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. 2-Arachidonoyl glycerol	NA	No data.	No data.	No data.	No data.
2. Acetonitrile	AL7700000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview: No data available.
Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection
Potential Health Effects (Acute and Chronic): The hazards identified with this product are those associated with the solvent(s).
Can cause fatal cyanide poisoning.
Irritant.
Material is irritating to the mucous membranes and upper respiratory tract.
May be fatal if swallowed, inhaled, or absorbed through skin.
May cause eye, skin, or respiratory system irritation.
Several hours may elapse from exposure to onset of symptoms.
The toxicological properties of this compound have not been fully evaluated.
LD 50 / LC 50: Please refer to Section 11.
Signs and Symptoms Of Exposure: Treat as cyanide poisoning.
Always have on hand a cyanide first-aid kit, together with proper instructions.
The onset of symptoms is generally delayed pending conversion to cyanide.
Nausea, vomiting, diarrhea, headache, dizziness, rash, cyanosis, excitement, depression, drowsiness, impaired judgement, lack of coordination, stupor, death.
Medical Conditions Generally Aggravated By Exposure: Those with history of central nervous system, heart or lung diseases, or liver, kidney, or thyroid problems may be more susceptible to the effects of this substance.

4. First Aid Measures

Emergency and First Aid Procedures: If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
Do not give direct mouth-to-mouth if victim ingested or inhaled this substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
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.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes

examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

Note to Physician: Acetonitrile is metabolized to cyanide. Patients with significant exposures must be observed for signs of cyanide poisoning and treated accordingly.

5. Fire Fighting Measures

Flash Pt: 2.00 C Method Used: Closed Cup
Explosive Limits: LEL: 4.4% at 25.0 C UEL: 16% at 25.0 C
Autoignition Pt: 523.00 C
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Note: Flammable as diluted in acetonitrile
Flammable Properties and Hazards: Can release vapors that form explosive mixtures at temperatures at or above the flash point.
Contact with strong oxidizers may cause fire.
Container explosion may occur under fire conditions.
Emits toxic and corrosive fumes under fire conditions.
Flammable liquid.
Vapors can travel to a source of ignition and flash back.
Extinguishing Media: For small (incipient), use alcohol foam, carbon dioxide, or dry chemical spray. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Use water spray to cool unopened containers.
Unsuitable Extinguishing Media: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
After removal, ventilate contaminated area and flush thoroughly with water.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not get on skin and clothing. Use with adequate ventilation. Wash thoroughly after handling.
Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas).
Avoid contact with skin and eyes.
Avoid prolonged or repeated exposure.
Do not reuse this container.
Keep away from sources of ignition.
Use with adequate ventilation.
Wash thoroughly after handling.
Precautions To Be Taken in Storing: Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information: Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood

MATERIAL SAFETY DATA SHEET

2-Arachidonoyl Glycerol

Page: 3

Printed: 07/24/2009

Revision: 07/21/2009

Supersedes Revision: 08/27/2005

Respiratory Equipment (Specify Type):	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as a backup to engineering controls.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	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.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	523.00 C
Flash Pt:	2.00 C Method Used: Closed Cup
Explosive Limits:	LEL: 4.4% at 25.0 C UEL: 16% at 25.0 C
Specific Gravity (Water = 1):	No data.
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	73 MM_HG at 20.0 C
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	~ 150 ug/ml* at 25.0 C
Solubility Notes:	*PBS pH 7.2, sol. in EtOH, DMSO, and DMF; see product insert.
Percent Volatile:	N.A.
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
Formula:	C23H38O4
Molecular Weight:	378.60
pH:	No data.
Appearance and Odor:	A clear, colorless solution

10. Stability and Reactivity

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Conditions To Avoid - Instability:	sensitive to heat protect from ignition sources
Incompatibility - Materials To Avoid:	acids bases oxidizing agents reducing agents alkali metals
Hazardous Decomposition Or Byproducts:	carbon dioxide carbon monoxide hydrogen cyanide nitrogen oxides sulfur oxides
Hazardous Polymerization:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Conditions To Avoid - Hazardous Polymerization:	No data available.

MATERIAL SAFETY DATA SHEET

2-Arachidonoyl Glycerol

Page: 4
Printed: 07/24/2009
Revision: 07/21/2009
Supercedes Revision: 08/27/2005

11. Toxicological Information

: The toxicological effects of this compound have not been thoroughly studied.

Toxicity Data:
Oral LD50 (rat):2460 mg/kg
Skin LD50 (rabbit):1250 uL/kg
Inhalation LD50 (rat):7551 ppm/8H
Dermal LD50 (rabbit):2000 mg/kg

Chronic Toxicological Effects: Investigated as a tumorigen, mutagen, and reproductive effector.
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
See actual entry in RTECS for complete information.
Acetonitrile RTECS Number: AL7700000

Carcinogenicity/Other Information: No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

: Runoff from fire control or dilution water may cause pollution.

Toxicity to fish:
LC50 - Pimephales promelas (fathead minnow): 1640 mg/l 96h
Toxicity to daphnia and other aquatic invertebrates:
EC50 - Daphnia magna (Water flea): 3600 mg/l 48h
NOEC - Daphnia magna (Water flea): 640 mg/l 14d

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Acetonitrile
DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: 1648
Packing Group: II

Additional Transport Information: According to IATA Regulations, this product ships as an excepted quantity.
Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. 2-Arachidonoyl glycerol	53847-30-6	No	No	No	
2. Acetonitrile	75-05-8	No	Yes 5000 LB	Yes	

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. 2-Arachidonoyl glycerol	53847-30-6	No		No	
2. Acetonitrile	75-05-8	HAP		Inventory, 8A PAIR	

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary clinical use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.